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# The

# BLUE JAY

A JOURNAL OF NATURAL HISTORY AND CONSERVATION  
FOR SASKATCHEWAN AND ADJACENT REGIONS

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## OUR ENVIRONMENTAL CRISIS

In 1970 concern for the health of our environment became so great that action groups formed all across Canada. They declared October 14 Survival Day in Canada and in most major cities they presented anti-pollution briefs to different levels of government.

The group in Regina known as Regina Pollution Probe presented its brief to the Provincial Government on October 14. In addition it organized a four-day teach-in, October 21-24, called Our Environmental Crisis. Concerned members of the general public met with professional biologists, chemists and social scientists to discuss various aspects of environmental deterioration. The teach-in was officially opened by John A. Livingston who emphasized, as did C. F. Bentley in the September *Blue Jay*, that pollution is related directly to population and to our current policies which expect and encourage continuing growth and expansion especially in industry.

During the second day various problems of pollution in Saskatchewan were discussed. Roy Cullimore reviewed what is known about the long term effects of pesticides on soil fertility. Pat Tones talked about pollution in the North Saskatchewan River below the pulp mill at Prince Albert (see September *Blue Jay*). Maureen Rever noted the effect of the Prince Albert pulp mill on our forests and Gary Wobeser discussed the problem of mercury pollution in Saskatchewan waters. During the evening Andrew Hamilton of the Fisheries Research Institute in Winnipeg gave a paper on phosphates and water pollution. This was followed by a panel discussion of the problems of pollution in our Qu'Appelle waterways.

During the third day attention focused on the population problem and resource exploitation. The consensus was that too frequently decisions are made with immediate economic gain in mind. As a result, effects on the environment are disregarded and long-term economic or conservation results ignored. One speaker from the audience spoke of the environment damage being done in the Arctic and of the polluting effect of thousands of abandoned oil drums; another volunteer spoke of the "cesspool of oil-coated waters" (Leader-Post, October 16, 1970) in the Moose Mountain Provincial Park. The analysis of local situations led to a statement concerning the world-wide implication of modern trends: the frightening prospect of a planet of concrete highways and parking lots and dead waterways and oceans.

During the teach-in participants viewed various films, some delightfully imaginative and beautiful, and some (like the film on strip-mining in West Virginia) explicit concerning the deplorable results of human greed. All made clear that man must decide whether convenience, pleasure and profit are worth the price which will inevitably be paid for them.

The teach-in ended with various committees preparing position papers and resolutions. (One titled "Government, Industry and Water Pollution," prepared by the Society for Environmental Action in the Qu'Appelle, is available from Regina Pollution Probe, 2363 McIntyre, Regina. It cites the Moose Jaw River as one of the most heavily polluted waterways in Saskatchewan but in spite of the Water Resources Commission report of June 1969 nothing has been done to improve the situation. The contribution of industry to water pollution in the Moose Jaw River is well documented.) During the evening a panel of three politicians discussed the resolutions and answered various questions from the floor. It is evident that elected political figures are reluctant to commit themselves concerning definite anti-pollution and conservation programs. While it is true that the entire problem is a complex one and requires expert planning, it is nevertheless essential that elected representatives of the people show a willingness to be independent and courageous. Unfortunately, that part of the teach-in designed to present the viewpoints of the various political parties in the country and of individual politicians was a disappointment. It appears that we must expend more time in convincing politicians of the importance of our concern.

The teach-in was a success because people from all segments of the community joined in voicing concern about the health and future of the environment. You can help by becoming better informed. You can write to companies which pollute. You can write to governments and politicians in support of our SNHS resolutions all of which will be printed in full in our next newsletter.

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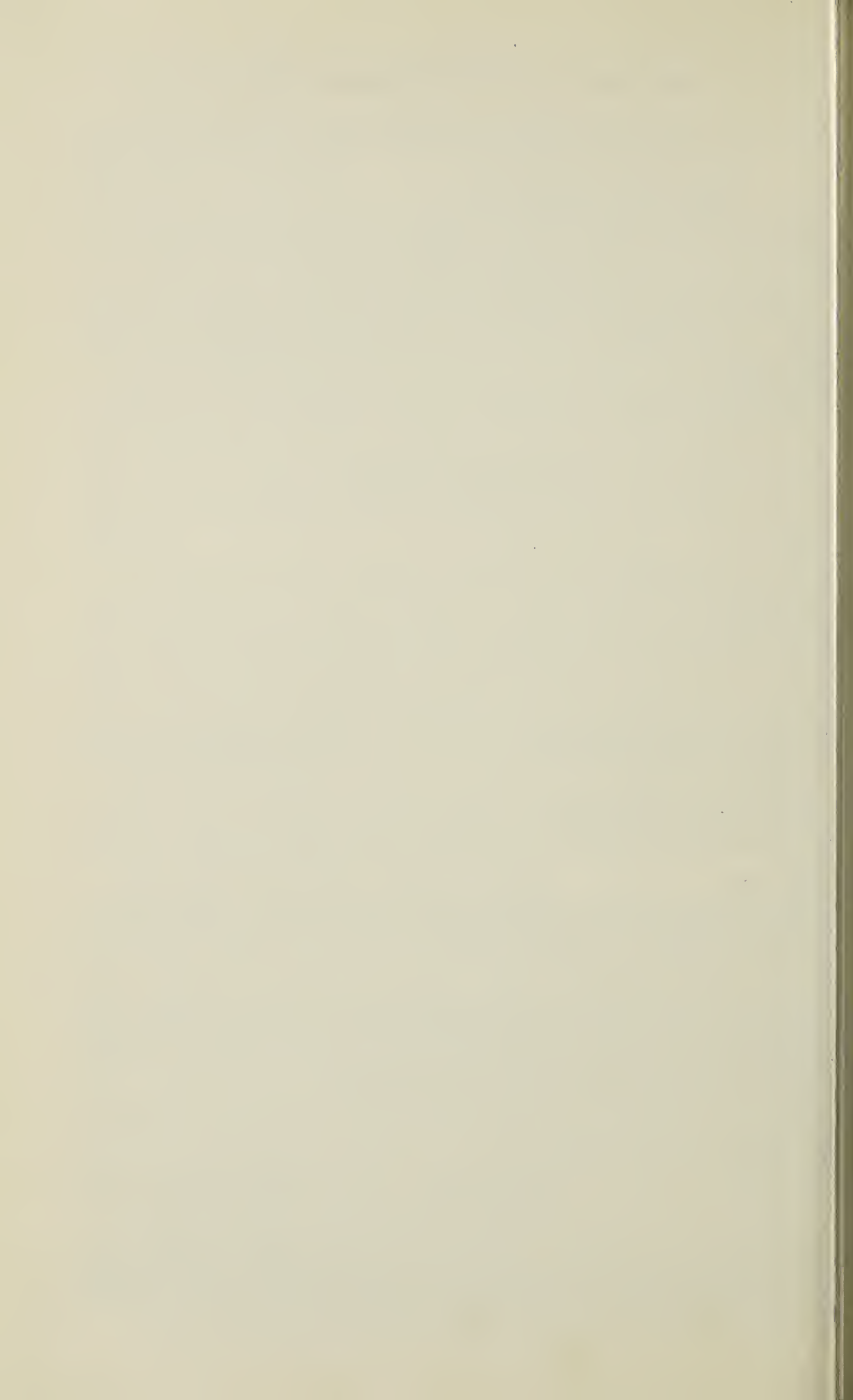
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## FRED G. BARD, NATURALIST AND CONSERVATIONIST



Photo courtesy University, Regina

On May 15, 1970, the University of Saskatchewan Regina Campus conferred an honorary doctor of laws degree on Fred G. Bard, former director of the Museum of Natural History in Regina. Though he held the position of Museum director from 1947-1970, Mr. Bard worked at the Museum for a total of forty-five years, years which saw the Museum begin to expand, experience the turmoil of the war years and finally achieve the construction of a permanent building — a building which in itself is a graphic testimonial to his imagination and energy. The dioramas at the Museum, unique of their kind, show his regard for scientific accuracy and his appreciation of artistic excellence. During these forty-five years Mr. Bard occupied himself not only with the various activities which a museum position demanded of him but also in becoming expert concerning two specific programs—the re-establishment in Southern Saskatchewan and adjoining regions of the

Canada Goose (by means of a special project on the Wascana marsh) and the effort to preserve the Whooping Crane from extinction. Now, though he has retired from active participation in museum work, Mr. Bard has no intention of abandoning his main interests. For he sees that in a sense the problems facing these two species epitomize the problem which confronts all living creatures. That problem concerns the inability of man (or at least the inability of modern man) to understand that

"All are needed by each one;  
Nothing is fair or good alone."

It is Mr. Bard's belief that modern man, who has become physically and spiritually urbanized, has no conception of the value of quiet. This in turn makes him heedless of the fact that the destruction of the quiet wilderness areas of the world will destroy that life which requires quietness for survival. The aspect which materially-minded man does not appear to appreciate is



that the destruction of the balance in nature, the refusal to recognize that all living things are part of the whole, will in the end lead to his own extinction.

But Mr. Bard does not speak in generalities only. He relates the global problem to the one which for so many years has been closest to his hand—the problem of the Wascana marsh. The complex marsh environment is, he believes, the most fascinating in the world but, because it is usually unspectacular from the scenic standpoint, the least understood. Added to this lack of understanding is the short-sighted tendency to overemphasize the importance of agricultural development, a tendency which results in the draining of marsh lands. Excessive draining cannot but have a detrimental effect on those marshes which, for one reason or another, have been retained. The Wascana marsh is a good case in point.

If the Wascana marsh is to be preserved and the projects (especially those relating to the Canada Goose) are to thrive, a long-term, clearly-defined policy must be formulated. According to Mr. Bard, many officials who are currently interested in conservation think only in terms of immediate action relating to minor problems. Government authorities must become aware that long-term programs which involve the inevitable expenditure of large sums of money are not luxuries but necessities. And such programs, both in relation to museum work and research and to environmental preservation, must be planned and implemented by people possessing precise, scientific knowledge. A vague kind of goodwill and a "good public relations" attitude are equally ineffectual. We have reached a stage in the destruction of our environment which necessitates definite scientific *control*. (The recent forest-fire threat in northern Alberta made clear that Whooping Crane nests must be *placed* in several locations if the birds are to survive.)

Mr. Bard has many specific proposals to make concerning the Wascana marsh. That view of the area

which emphasizes the importance of landscaping and "beautifying" is essentially, he feels, a superficial one. It is obligatory to preserve the natural environment of the marsh in order to maintain habitat requirements. Islands must be built, tributaries dammed, native plants introduced, sections zoned for scientific control projects. If such control measures were employed, Mr. Bard envisages possibilities for the introduction of many new species: Snow Geese, for example, could be grounded in the Wascana marsh and possibly wintered at Ipsco; waterfowl could be brought in for display ponds; Tree Swallow nests could be introduced. In other words, the "beautifying" urge would be satisfied at the same time as the broader conservation aim would be achieved.

The ordinary citizen, too, must be taught a willingness to be guided by expert opinion. If the Department of Natural Resources were to embark on a concentrated informational program — by means of publicized research studies and films and lectures designed to stimulate an appreciation of our wildlife inheritance — the general public, both children and adults, would recognize the importance of governmental and individual responsibility. (A child, after all, does not understand that disturbing colonial birds at nesting-time can have disastrous results unless someone informs him of the fact.)

Those who have worked in the field with Fred Bard invariably comment on his ability to transmit to others both a sense of excitement and an urge to act. In the words of Dr. L. Greenberg, who presented him to the Chancellor of the University for his degree: "Mr. Bard is a man who does things; he does not just talk." I return, therefore, to my earlier statement concerning his future. Fred Bard has retired as Director of the Museum of Natural History. It is unthinkable that he should retire from the struggle for conservation and particularly the struggle for conservation in Saskatchewan.—*Jeanie Wagner, Regina.*



## ROBERT D. SYMONS, NATURALIST, WRITER, ARTIST

In the words of Bob Symons, "The world is a beautiful place but by making it man-centred man himself has changed it to a place of destruction." Man has misunderstood that the position he enjoys, the position which has given him "dominion . . . over every living thing" entails a sense of responsibility. Perversely, man has misunderstood the injunction as a kind of *carte blanche* to dominate, even if his domination involves the breaking of natural cycles. Now he is discovering, with dismay, that, as a result of his blindness, his own destruction is possible, even imminent. He finds himself alternating between moods of nostalgia and despair.

When Mr. Symons talks, he exhibits both these moods which are common to modern man. He looks nostalgically at the past when people worked hard to maintain themselves, when they did not demand much in the way of physical ease, when they even had time to "stand and stare." He looks with despair at that large segment of the population still obsessed with the desire for material gain; at that group which lives in the cities but flocks in its spare time to the few remaining wilderness areas and proceeds, in the name of recreation, to pollute and destroy; and at that unhappy minority which, out of a frequently sincere revulsion against modern society, withdraws, yet is content to maintain a parasitical form of existence.

But Mr. Symons does not allow himself the indulgence of remaining in either of these negative moods for long. He is much too positive a personality for that. As he says himself, instead of wallowing in either nostalgia or despair we must stop and evaluate. If we do so, we shall, he believes, conclude that nature is always right and that all life (not just human life) is important. Central to grasping this concept is the need to restore to the imagination of man a sense of wonder. In no small way Bob Symons has, dur-

ing his lifetime, contributed to the restoration of this sense by means of his conversation, his writing and his painting.

A conversation with Bob Symons is never dull. Because he is willing to discuss any controversial topic, one may disagree with his viewpoints and disagree violently, but it is impossible to remain unstimulated. He has the ability to transmit the apprehension that to be alive is to be excited. For him there is so much to see, so much to ponder, so much to learn, so much to do, that to be bored or unaware is out of the question. The point here, of course, is that his sense of excitement grows out of the naturalist's knowledge of the complexity of the world. As a person who went sketching with him one day remarked, "He made me see that a square yard of land could be the study of a lifetime."

Those who read Mr. Symons' books are certain to be impressed by his breadth of understanding and his sensitivity. In *The Broken Snare* he emphasizes the instinctual quality of life (something which, incidentally, he believes modern man has denigrated). After the wolf escapes from the broker's snare and the Man is "half-sorry, half-glad," there is a section which subtly notes the link which connects the man and the animal:

"Within a week a chinook blew through a gash in the mountains. He [the wolf] was ready, rested and able to travel. He woke, stretched, and yawned, showing his strong young teeth below his drawn-back lip. He stood looking east to where three miles away Deep Springs Ranch lay shrouded in the grey of dawn.

It was seven o'clock, but the January sun would not show itself till after nine, although the Man was already astir. The wolf could see a tiny pin-point of light flickering between the house and the barn.

He howled once, long and quavering. It was his good-bye to Wild Horse Creek and the Cutbank.

The point of light stood still."



Another kind of closeness between Man and creature (this time exhibiting the responsiveness of the essayist himself) occurs in *Many Trails*.

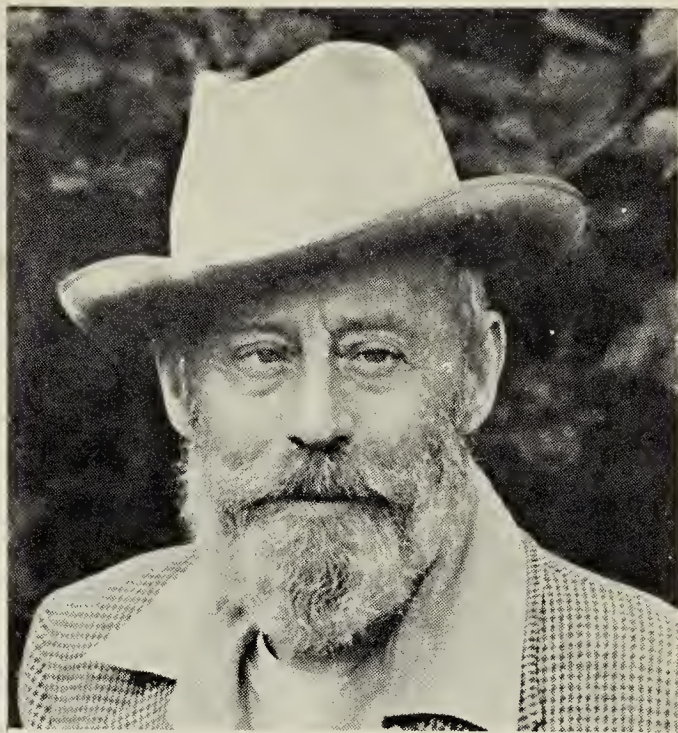
"I shall never forget one ride I had through a storm of snowflakes ["snow buntings" they are called by naturalists]. This was not the first time I had seen flocks of breathless magnitude but never before had I experienced the exhilaration of being lost in a blizzard of living, singing birds." Quietly the human being becomes a part of the "merry throng" as it expresses its "everlasting faith in the miracle of the seasons."

Many of the sections of *Hours and the Birds* show Symons' ability to combine accurate observation with imaginative speculation. Notice the approach he adopts in his treatment of the Snowy Owl, one of "the cats of the bird world":

"[The owl appears] like a snow-leopard with his deep and fluffy feathers, more or less barred, or spotted with black, semi-concealed. His great round head and deeply "furred" legs and toes, no less than his calm quartering flight, make him an object of wonderment . . . at peace with the world.

Once, long ago, I saw a belated snowy owl perched on a cake of ice at Jackfish Lake. The spring break-up was in the last stages. The day was fine, the sun hot. From far out in the lake the hollow, musical voices of whistling swans rose and fell. Their flocks glistened white in the sunlight. Closer to shore, the snowy owl, evidently distressed, clung to his cool iceflow as the only friendly thing in this unfamiliar world. He shifted uneasily from time to time, turning his solemn head around as if he had no front or back, as the little waves rocked his craft. Then, taking flight, he winged towards the swans and circled above them several times. I think he mistook the flock for a bigger and better ice-cake, as he sought several times to settle but was sent back to his original perch by their clamour and threshing."

Mr. Symons' talent as a painter has been widely recognized. All three of his books include sketches and paintings which are an integral part of the



text. These, along with many other canvases which have found their way into a variety of private and public collections (and which include some of the diorama backgrounds at the Museum of Natural History), show him as an artist of great merit. His best work is the work of the skilled craftsman and the imaginative interpreter of the natural world.

This fall the University of Saskatchewan Regina Campus conferred an honorary doctor of laws degree on Robert David Symons. Margaret Belcher, in presenting him to the Chancellor of the University at the October convocation, said: "[Saskatchewan] is the country that he knows best, for he has followed its many trails from the High Plains of the Southwest where "the wind is part of all one loves", north to the "strong woods" of the old fur country and the lovely quiet of a forest ranger's station. It is also in Saskatchewan that Robert Symons has made his major contribution to the community and the arts, and the University of Saskatchewan now has the honour of recognizing that contribution."

A fitting tribute to the naturalist-writer-artist who in *Hours and the Birds* enunciates his philosophy thus: "Look for beauty and you will find it, remembering that the eye sees only as the heart directs."—*Jeanie Wagner, Regina.*



# SASKATCHEWAN BIRD BANDERS — FRED G. BARD\*

by C. Stuart Houston, 863 University Drive, Saskatoon

Beginning in a small way with six birds banded in 1928 and four in 1929, Fred G. Bard soon increased the tempo of his banding until his peak year of 1938 when he banded 1925 birds of 46 species. His father, Fred Bard, Sr., had a subpermit between 1939 and 1948 and banded 717 individuals of 33 species, and at times Bard was also assisted by members of the Museum staff. There was little opportunity for banding during the war years and the pressure of museum work caused little banding to be done after 1950, three years after Bard became director of the Saskatchewan Museum of Natural History.

Bard's all-time banding totalled 13,363 individuals of 103 species. One important activity was waterfowl banding, much of it in cooperation with Ducks Unlimited, with 3549 ducks, geese and coots banded. An equally important contribution was the banding of colonial birds. For this purpose, Bard visited Big Quill Lake, eight miles north of Dafoe, in 1931, 1932 and 1935; Big Quill, two miles north of Kandahar, in 1936 and 1937; Last Mountain Lake east of Holdfast in 1937; the north end of Last Mountain Lake in 1934, 1936, 1938, 1939, 1940, 1948, 1949, 1950, and 1952; Old Wives Lake in 1958. In his active years, these banding totals surpassed and the number of recoveries far exceeded, those of any other bander in Saskatchewan. For the tabulation in Table 1 of banding and recoveries by species, all but the waterfowl recoveries have been verified by computer printout.

I have mapped the following: White Pelicans banded at Quill Lake, White Pelicans banded at Last Mountain Lake, Double-crested Cormorants banded at Quill Lake, Double-crested Cormorants banded at Last Mountain Lake 1934-37 and Double-crested Cormorants banded at Last Mountain

Table 1. Summary of bird banding by F. G. Bard.

Species	Number Recoveries	Number Banded	Per cent Recoveries
White Pelican .....	958	86	9.0%
Double-crested			
Cormorant .....	2038	371	18.5%
Great Blue Heron .....	31	2	.....
Black-crowned			
Night Heron ....	21	1	.....
Canada Goose ....	196	14	7.2%
Mallard .....	2570	404	15.8%
Gadwall .....	49	8	16.3%
Pintail .....	196	59	30.0%
Blue-winged Teal ..	300	8	2.7%
American Widgeon ..	81	9	11.1%
Shoveler .....	60	3	5.0%
Lesser Scaup .....	15	2	.....
Ferruginous Hawk ..	4	1	.....
Marsh Hawk .....	24	3	12.5%
Sharp-tailed			
Grouse .....	28	1	.....
American Coot ....	42	1	.....
Killdeer .....	26	1	.....
Ring-billed Gull ....	2408	110	4.6%
Franklin's Gull ....	270	3	1.1%
Common Tern .....	1244	2	.2%
Mourning Dove .....	80	1	.....
Yellow-shafted			
Flicker .....	77	3	3.9%
Eastern Phoebe ....	6	1	.....
Tree Swallow .....	22	1	.....
Barn Swallow .....	49	3	6.1%
Black-billed			
Magpie .....	90	24	26.6%
Common Crow .....	781	167	21.7%
House Wren .....	249	1	.....
Catbird .....	205	4	2.0%
Brown Thrasher ..	63	3	4.8%
Robin .....	160	5	3.1%
Cedar Waxwing ....	85	1	.....
Yellow Warbler ....	64	1	.....
Red-winged			
Blackbird .....	90	2	.....
Common Grackle ..	128	16	12.4%
68 other species ...	653	0	.....
TOTAL .....	13363	1322	9.9%

\* No. 13 in a series of biographies of Saskatchewan bird banders.





Fig. 1. Recoveries of White Pelicans banded at Quill Lake by Fred G. Bard, 1931, 1932, 1933, 1936, 1937. Note: squares represent direct recoveries (same year); triangles — January 1 to June 30 of the following year; circles — more than one year old.







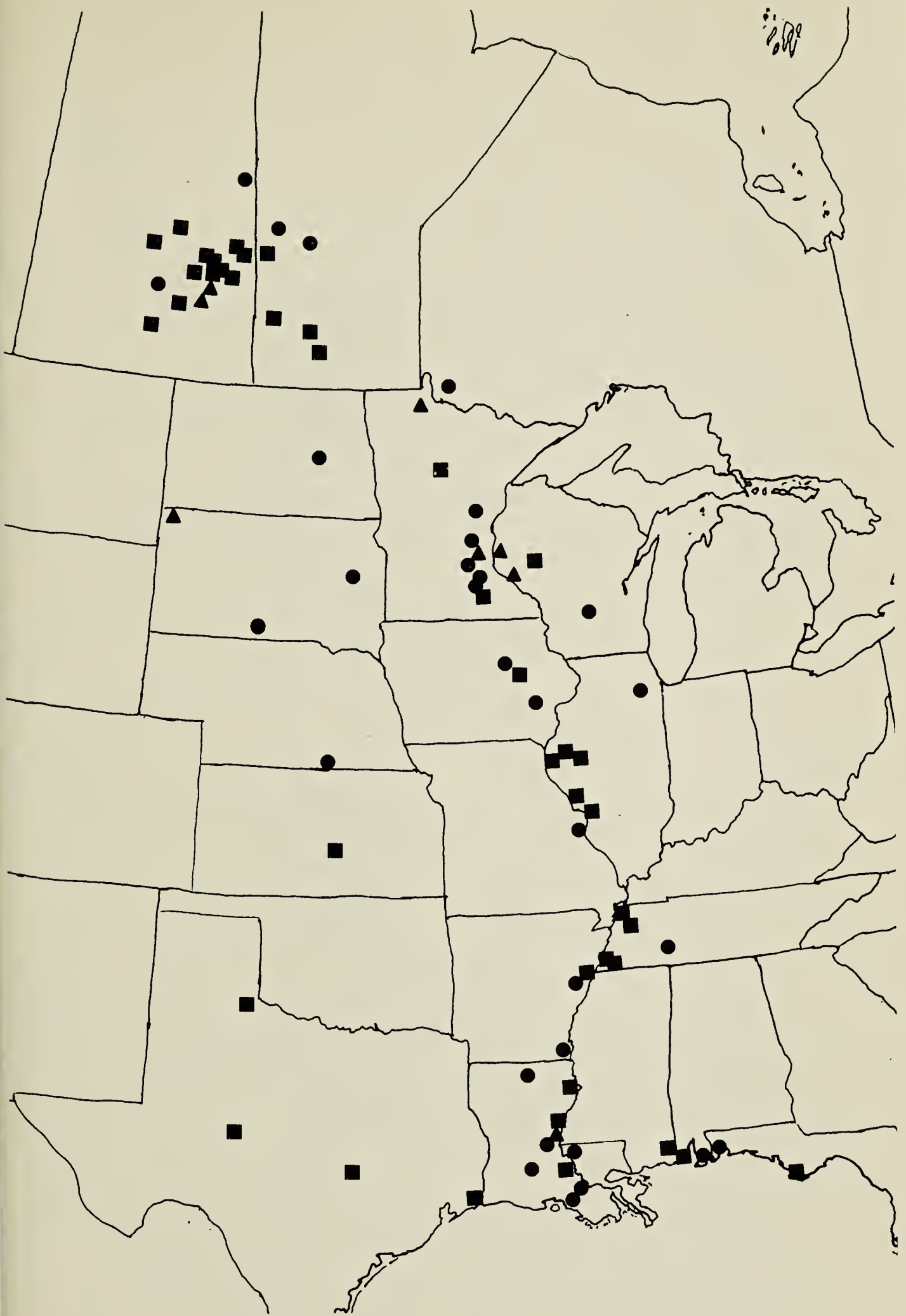


Fig. 3. Recoveries of Double-crested Cormorants banded at Quill Lake by Fred G. Bard, 1931, 1932, 1935, 1936. Note: squares represent direct recoveries (same year); triangles — January 1 to June 30 of following year; circles — more than one year old.



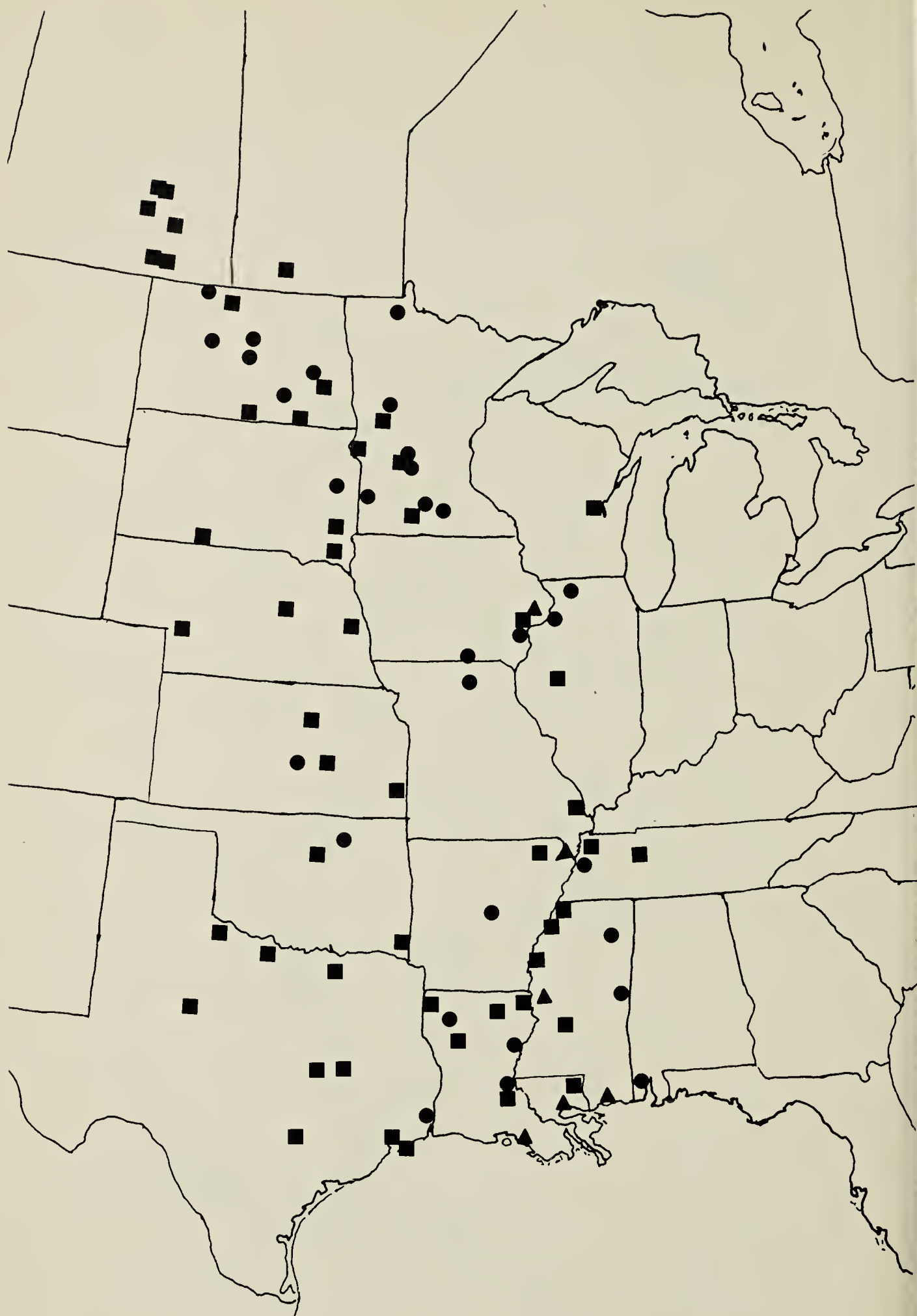


Fig. 4. Recoveries of Double-crested Cormorants banded at Last Mountain Lake by Fred G. Bard, 1934, 1936, 1937. Note: squares represent direct recoveries (same year); triangles — January 1 to June 30 of following year; circles — more than one year old.



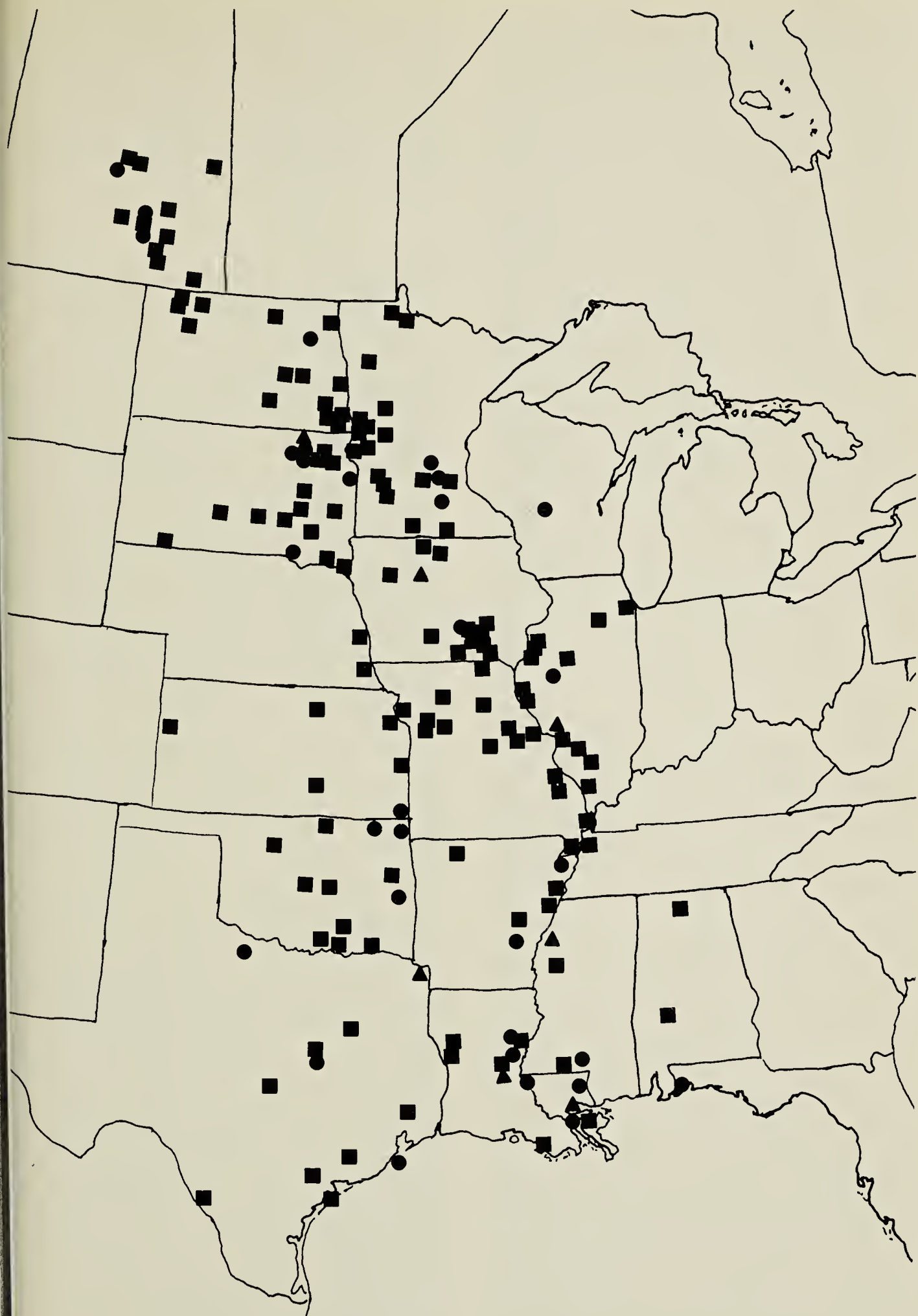


Fig. 5. Recoveries of Double-crested Cormorants banded at Last Mountain Lake by Fred G. Bard, 1938, 1939, 1940, 1948, 1949. Note: squares represent direct recoveries (same year); triangles — January 1 to June 30 of following year; circles — more than one year old.



Lake 1938-49. Note that the pelicans from Old Wives tend to go further west than those from Last Mountain and are more likely to be recovered in Alberta, Wyoming, Utah and Mexico, though two crossed over eastward to Florida. Cormorants from both lakes move south along the Mississippi and its tributaries, with no difference between those banded in the early years and later years. (Observers in the Illinois River valley and in Wisconsin noted a change in the migration of cormorants, with a sudden decline in their numbers, beginning after 1950).

One of Bard's White Pelicans appears to hold the world longevity record for this species. 378-00930 was placed on a flightless young pelican at Imperial Beach at the north end of Last Mountain Lake on July 9, 1948. It was found dead of starvation at Big Stone City, South Dakota on October 12, 1960, 12 years, 3 months and 3 days after banding. (The previous record was 10 years, 10 months, 9 days: Rydzewski, *The Ring* 34:177, 1963).

Bard's recoveries of Marsh Hawks (from Washington, Oklahoma and Texas), Robins (Mississippi and Oklahoma), Common Grackles (Minnesota and Louisiana), Common Crows (the entire tier of states from North Dakota south to Texas), and a Black-crowned Night Heron have been mapped in previous articles in the *Blue Jay*. The most impressive recovery was a Franklin's Gull banded July 8, 1938 at Buffalo Pound Lake and recovered from the dead gull on December 15, 1938 in Peru. It was found by Mr. Jose Oliveri E. Hijos at Urcon Hacienda, 8° 35' S., 77° 51' W. Other recoveries of interest include Great Blue Herons shot at Tampico, Tamaulipas, Mexico and Frederick, Oklahoma; a Ferruginous Hawk found dead in Kansas; a Killdeer killed at Annaudville, Louisiana; and a Mourning Dove shot in Louisiana. Flickers travelled to Iowa and Oklahoma, a Barn Swallow was found dead at Luverne, Minnesota, a Brown Thrasher was shot at Scurry, Texas and a Cedar Waxwing was shot at Frankling, Louisiana.

To Fred G. Bard I wish to express my thanks for the loan of his massive files of banding records, my appreciation for the magnificent museum he has left behind on his retirement, and my congratulations on his honorary doctorate. Well done, Dr. Bard!

## ANNUAL MAY-DAY BIRD COUNT, SASKATOON, MAY 23, 1970

by Stan Shadick and J. F. Roy, Saskatoon

This year, 48 observers in nine parties established a new record of 162 species, five more than on May 24, 1969, when 49 observers recorded 157 species. Conditions were nearly ideal in the morning with occasional showers and light winds. By mid-afternoon strong westerly winds made birding difficult.

Records of interest include 277 Western Grebes (compared with 34 in 1969 and 12 in 1968); large numbers of White-rumped Sandpipers (368), Baird's Sandpiper (1210), Still Sandpiper (1560), and the irregular Buff-breasted Sandpiper (107). The highest tally for any single species was for the Northern Phalarope, 3,978 having been counted. The Short-eared Owl was again scarce, only one bird was counted (the same as in 1968), compared with last year's total of 32. Chestnut-collared Longspurs appear to be increasing in recent years; a record high of 271 were observed.

**WEATHER:** Temperature at 4:00 a.m. 57°; high during the day, 75°; at 9:00 p.m. 61°. Sky overcast to cloudy. Winds W to NW 10-15 mph with gusts to 24 in the afternoon. Rainfall 0.05".

**SPECIES LIST** (1969 numbers in brackets): Common Loon 1 (2); Red-necked Grebe 6 (4); Horned Grebe 130 (102); Eared Grebe 108 (35); Western Grebe 277 (34); Pied-billed Grebe, 17 (13); White Pelican, 7 (0); Great Blue Heron 3 (4); Black-crowned Night Heron 2 (0); American Bittern 8 (1); Whistling Swan 2 (1); White-fronted Goose 3 (5); Canada Goose 8 (0); Mallard 225 (222); Gadwall 85 (82); Pintail 224 (220); Green-winged Teal 82 (53); Blue-winged Teal 220 (170); American Widgeon 196 (142); Shoveler 213 (200); Redhead 115 (84); Ring-necked Duck 20 (22); Canvasback 183 (106); Lesser Scaup 238 (165); Common Goldeneye 14 (6); Bufflehead 22 (28); Ruddy Duck 118 (111); Common Merganser 4 (1); Turkey Vulture 2 (0); Sharp-shinned Hawk 1 (1); Cooper's Hawk 2 (5); Red-tailed Hawk



24 (17); Swainson's Hawk 19 (19); Rough-legged Hawk 1 (2); Marsh Hawk 79 (96); Pigeon Hawk 3 (3); Sparrow Hawk 6 (8); Ruffed Grouse 7 (7); Sharp-tailed Grouse 65 (83); Ring-necked Pheasant 10 (12); Gray Partridge 64 (36); Sandhill Crane, 5 (5); Sora 40 (28); American Coot, 462 (182); Semipalmated Plover 4 (0); Piping Plover 1 (2); Killdeer 122 (118); Golden Plover 18 (15); Black-bellied Plover 176 (123); Ruddy Turnstone 32 (27); Common Snipe 4 (3); Long-billed Curlew 10 (2); Upland Plover 16 (6); Spotted Sandpiper 22 (46); Willet 67 (60); Lesser Yellowlegs 5 (11); Knot 4 (8); Pectoral Sandpiper 135 (72); White-rumped Sandpiper 368 (17); Baird's Sandpiper 1210 (14); Least Sandpiper 41 (4); Dunlin 6 (2); Dowitcher 40 (4); Stilt Sandpiper 1560 (347); Semipalmated Sandpiper 154 (36); Buff-breasted Sandpiper 107 (25); Marbled Godwit 78 (59); Hudsonian Godwit 1 (0); Sanderling 28 (28); American Avocet 58 (287); Wilson's Phalarope 567 (246); Northern Phalarope 3978 (1450); Herring Gull 4 (0); California Gull 51 (22); Ring-billed Gull, 347 (75); Franklin's Gull 362 (135); Common Tern 54 (12); Black Tern 503 (537); Rock Dove 114 (84); Mourning Dove 118 (85); Great Horned Owl 10 (6); Burrowing Owl 2 (1); Long-eared Owl 2 (8); Short-eared Owl 1 (32); Saw-whet Owl 1 (1); Common Nighthawk 15 (9); Ruby-throated Hummingbird 2 (1); Belted Kingfisher 7 (1); Yellow-shafted Flicker 70 (55); Yellow-bellied Sapsucker 1 (6); Hairy Woodpecker 4 (3); Downy Woodpecker 2 (1); Eastern Kingbird 148 (94); Western Kingbird 57 (39); Eastern Phoebe 2 (1); Say's Phoebe 1 (0); Least Flycatcher 85 (95); Western Wood Pewee 1 (3); Olive-sided Flycatcher 1 (1); Horned Lark 200 (238); Tree Swallow 277 (275); Bank Swallow 223 (230); Barn Swallow 205 (184); Cliff Swallow 106 (7); Blue Jay 6 (4); Black-billed Magpie 306 (278); Common Crow 843 (633); Black-capped Chickadee 9 (0); Red-breasted Nuthatch 1 (2); House Wren 55 (64); Long-billed Marsh Wren 1 (1); Catbird 30 (13); Brown Thrasher 64 (53);

Robin 138 (151); Swainson's Thrush 4 (25); Veery 15 (6); Mountain Bluebird 96 (71); Sprague's Pipit 94 (14); Cedar Waxwing 6 (0); Loggerhead Shrike 97 (71); Starling 157 (144); Red-eyed Vireo 9 (3); Warbling Vireo 20 (38); Tennessee Warbler 11 (8); Orange-crowned Warbler 3 (2); Yellow Warbler 173 (130); Bay-breasted Warbler 1 (0); Blackpoll Warbler 2 (0); Palm Warbler 1 (0); Ovenbird 1 (0); Yellowthroat 10 (9); American Redstart 5 (1); House Sparrow 210 (174); Bobolink 13 (16); Western Meadowlark 811 (783); Yellow-headed Blackbird 404 (194); Red-winged Blackbird 348 (236); Baltimore Oriole 76 (70); Brewer's Blackbird 215 (196); Common Grackle 35 (30); Brown-headed Cowbird 188 (258); Rose-breasted Grosbeak 3 (7); Pine Siskin 29 (0); American Goldfinch 24 (87); Red Crossbill 2 (0); Rufous-sided Towhee 50 (44); Lark Bunting 34 (5); Savannah Sparrow 98 (108); Baird's Sparrow 35 (15); Le Conte's Sparrow 14 (3); Vesper Sparrow 180 (119); Lark Sparrow 6 (5); Tree Sparrow 5 (0); Chipping Sparrow 51 (101); Clay-coloured Sparrow 203 (170); Harris' Sparrow 1 (0); White-crowned Sparrow 1 (4); Song Sparrow 91 (98); McCown's Longspur 7 (11); Lapland Longspur 484 (1050); Chestnut-collared Longspur 271 (53); Snow Bunting 1 (0).

Total Species 162. Individuals 21,158+. Participants: Mark Abley, Michael Bantjes, Rod Bantjes, T. M. Beveridge, Normalee Bisha, Ray Bisha, Philip Boerma, Bob Cyr, Rachel Daggett, David Epp, Ian Etches, Shelley Ferguson, Bob Gehlert, Marie Gillespie, Bernie Gollop, Maddie Gollop, Stuart Golly, Jack Greaves, Emil Guenther, Scott Hale, Judith Henly, David Houston, Don Houston, Mary Houston, Stuart Houston, Don Karasiuk, Margaret Mahon, Cliff Mathews, Lou Nicholson, Ole Nielsen, Arnold Nijssen, Thelma Pepper, Wayne Renaud, Maureen Rever, Bill Richards, Florence Richards, N. Robinson, Frank Roy, A. Schnell, John Shadick, Stan Shadick, Ted Shepherd, Jim Slimmon, Alan Smith, Jim Wedgwood, Rob Wilson, Garry Wobeser, Lucy Young.

# GREAT BLUE HERON COLONIES IN SASKATCHEWAN IN 1970

by **Kees Vermeer**, Canadian Wildlife Service, Edmonton, Alberta, and  
**Gary G. Anweiler**, Melville, Saskatchewan

A survey of nesting colonies of Great Blue Herons was made in Saskatchewan in the summer of 1970 to obtain information on distribution, size, and habitat of heronries. Heronries were located by asking naturalists and wardens if they knew of colonies in

their areas and by searching apparently suitable habitat along rivers and around lakes. As the survey was not exhaustive, colonies may have been missed, and further information on heronries unknown to the writers will therefore be much appreciated.



Fig. 1. Great Blue Heron colonies in Saskatchewan, 1970.



Thirty-one active heronries were located in Saskatchewan in 1970 as shown in Figure 1. Numbers in that figure correspond to colonies shown in Table 1. The number of nests ranged from 1 to 75, and the mean colony size was 26.8. This is not significantly different ( $P > 0.05$ ) from the mean colony size of 21.3 nests of 27 colonies ranging from 1 to 55 observed in Alberta in 1967 (K. Vermeer, 1969, Great Blue Heron colonies in Alberta. *Can. Field-Nat.*, 83:237-242). Of the 31 active colonies 17 were located near rivers and creeks, 12 on lake islands and two near lake shores.

Sixty per cent of 15 colonies north of Saskatoon, 50° 07'N, were on lake

islands as compared to only 19 per cent of 16 colonies south of that city. For the same latitude in Alberta it was 81 and 19 per cent respectively. The large percentage of colonies found on lake islands north of the above latitude may be related to the greater availability of lake islands there than in the southern parts of Alberta and Saskatchewan.

As in Alberta (Vermeer, 1969), Great Blue Herons in Saskatchewan chiefly nested in poplar trees over 20 feet in height (Table 2). Mixed colonies of Black-crowned Night and Great Blue Herons were found in choke-cherry bushes at Old Wives Lake and in low buffalo berry bushes along the

Table 1. Location and size of Saskatchewan Great Blue Heron colonies in 1970.

Water body	No. nests	Section	Township	Range
1. Churchill Lake	21	—	80	16W3
2. Kazan Lake	75	13	76	16W3
3. Primrose Lake*	20	11	69	25W3
4. First Mustus Lake	14	4	63	19W3
5. Suggi Lake	1	15	62	6W2
6. Lavallée Lake	15	—	61	4W3
7. Delaronde Lake	64	5	60	8W3
8. Delaronde Lake	40	2	57	7W3
9. Anglin Lake	40	10	55	27W2
10. Saskatchewan River	8	1	52	14W2
11. Saskatchewan River	16	20	49	21W2
12. South Saskatchewan River	6	—	46	26W2
13. North Saskatchewan River	2	16	44	5W3
14. North Saskatchewan River	5	34	40	7W3
15. North Saskatchewan River	15	26	39	11W3
16. Marean Lake	70	6	41	11W2
17. Madge Lake	30	—	31	30W1
18. Horseshoe Lake	50	2	29	5W2
19. Arm River	2	14	25	28W2
20. Arm River	4	2	22	26W2
21. Qu'Appelle River	25	28	20	20W2
22. Qu'Appelle River	7	12	19	7W2
23. Qu'Appelle River	24	26	19	22W2
24. Buffalo Pound Lake	65	31	18	24W2
25. Swift Current Creek	13	34	18	13W3
26. Old Wives Lake*	5	29	13	29W2
27. Tenaille Lake	9	28	13	26W3
28. Bone Creek	50	4, 9	11	20W3
29. Harris Reservoir	65	8	10	26W3
30. Frenchman River	43	12	5	15W3
31. Southwest of Fife Lake	26	27	2	30W2

\*Not visited in 1970. Counts at Primrose and Old Wives Lakes made in 1968 and 1969 respectively.

Table 2. Tree habitat of active Great Blue Heron Colonies.

Dominant tree species in colony	No. colonies	Prevalent condition of nesting trees		Estimated average height in feet*			
		alive	dead	1-10	11-20	21-30	Over 30
<i>Populus</i> spp.**	19	15	4		1	9	9
<i>Picea glauca</i>	4	4					4
<i>Acer negundo</i>	2	2			1	1	
<i>Fraxinus pennsylvanica</i>	2	2				2	
<i>Betula papyrifera</i>	1		1				1
<i>Ulmus americana</i>	1	1				1	
<i>Prunus virginiana</i>	1	1		1			
<i>Shepherdia</i> sp.	1		1	1			
Total	31	25	6	2	2	12	14

\*Height in one colony unknown

\*\*Mostly *Populus balsamifera* and *P. tremuloides*

Frenchman River. In the latter colony were also four nests of Canada Geese. Great Blue Herons nested together with Double-crested Cormorants in birches and aspen poplars at Kazan Lake. The cormorants occupied the lower branches. Five heronries were observed to contain one Great Horned Owl nest each and one pair of Ospreys bred in a heronry along the Saskatchewan River near Nipawin.

At least 20 heronries are known to have disappeared in Saskatchewan over the years (Table 3). Nine of those

ceased to exist in the 1960's. Five colonies appear to have disappeared because of disturbance by shooting (Crane Lake - Skull Creek), hail (Fairwell Creek), flood (Middagh Lake), tree cutting (Whitewood Lake) and nest robbing (Qu'Appelle River, No. 13). Causes of decline in the other 15 colonies are unknown. Active colonies have also been disturbed by the above causes. A rancher dwelling near the active heronry at Swift Current Creek reported that many young herons were killed during a hailstorm

Table 3. Great Blue Heron colonies no longer active in Saskatchewan.

Water body	Section	Location Township	Range	Last year known to breed
1. Ministikwan Lake	17	58	25W3	1968±1
2. Delaronde Lake	27	57	7W3	1965±2
3. Paddling Lake	10	46	7W3	1930-1940
4. Acton Lake	30	45	13W3	1932
5. Basin Lake	27	42	23W2	1920?
6. North Saskatchewan River		41	15W3	1938±2
7. Lizard Lake	36	38	14W3	1958
8. Whitewood Lake	27	29	17W2	1943±2
9. Last Mountain Lake		28	24W2	1932
10. Middagh Lake	9	24	4W3	1950's
11. Pearl Creek	28	19	7W2	Late 1960's
12. Qu'Appelle River	23	19	12W2	Late 1950's
13. Qu'Appelle River	4	19	11W2	Late 1950's
14. Qu'Appelle River	1	18	33W1	1969
15. Pipestone Creek		15	4-5W2	1968-1969
16. Pipestone Creek	19	12	31W1	1967±1
17. Crane Lake - Skull Creek		12-13	22-23W3	1906
18. Scott-Ray Lake	21	10	3W2	Early 1960's
19. Sandy Lake	16	10	4W2	1965
20. Fairwell Creek	31	6	24W3	1963±1



in 1966 and that the colony has been subsequently reduced in size. He also reported that one person took a few dozen eggs from that colony in 1969. Yost (pers. comm.), dwelling in the vicinity of the active heronry southwest of Fife Lake, reported that the herons probably moved from west of Rock Glen to their present site because of human disturbance. The birds still are shot at occasionally but Mr. Yost does what he can to prevent this. We hope that readers will watch vigilantly for any form of human disturbance to heronries in their locality.

## Acknowledgments

Many naturalists and wardens provided information or gave assistance in locating heronries. Special thanks go to Dr. C. S. Houston, Saskatoon, who provided a detailed list of heronries, D. W. A. Whitfield, Saskatoon, who located several new heronries along rivers by plane, R. Isbister, Edmonton, who surveyed the heronries at Churchill, Kazan and Lavallée Lakes and J. E. Polson and T. Donald, who conducted a brief and preliminary survey in 1969.

## A THIRD RED-BELLIED WOODPECKER RECORD FOR SASKATCHEWAN

by **Frank H. Brazier**, 2657 Cameron Street, Regina

Reclining at ease in the shade of several tupelos, popularly known as "black gums", I often watched the comings and goings of a family of Red-bellied Woodpeckers at a feeder in a Louisiana garden. I also saw this attractive and distinctive bird often during a recent visit to Florida.

Because I am familiar with the Red-bellied Woodpecker (*Centurus carolinus*) through my travels in the southeastern United States, I was sure when I wandered into Manley Callin's front yard at Fort San, Saskatchewan, on July 19, 1970, that a woodpecker which landed on a power-line pole about 100 yards away belonged to this species. A Yellow-shafted Flicker was nearby on the pole, so I could see that the newcomer was smaller, about Hairy-sized. The size of the bird and the absence of the typical Hairy Woodpecker pattern when viewed sideways at that range sent me racing for my binoculars which I had left in my car. A few seconds later my 10x50's brought it well into viewing range. It had obligingly shifted a quarter-turn to the left around the pole, giving me a field-guide view of the back; the red over part of the nape, the gray crown and the fine-barred back left no doubt that I was seeing a Red-bellied Woodpecker. The size of the nape patch indicated a female.

This was the third Red-bellied Woodpecker I had seen in Saskatchewan, and I was sure that it would be a first record for Fort Qu'Appelle and the vicinity, and a "lifer" for Manley Callin. Unfortunately, however, Manley failed to hear my call and I had to run in to get him. Returning, we scoured the neighbourhood fruitlessly for some time. Then, when poking through the bush bordering a meadow (those who were at the first annual June field meeting of the Saskatchewan Natural History Society and saw the breeding Yellow-breasted Chat would know the spot), a bird flashed by and perched briefly on a dead tree limb before vanishing into the foliage, long enough for me to get a few seconds' view through the glasses. It was enough to convince me, though I had only a low-angle look, that it was the same bird.

Saskatchewan's first Red-bellied Woodpecker, a female, was seen in the Legislative Grounds in Regina on May 23-26, 1959 (*Blue Jay*, 17:95). I had seen that bird and, at practically the same spot, on October 12, 1961, a male of this species flew to a tree within a few feet of me. Lucy Eley later mentioned that she had seen a Red-bellied Woodpecker in that vicinity on about that date.



# A SECOND BARRED OWL NEST RECORD FOR SASKATCHEWAN

by R. E. Gehlert, 12155 - 96 Street, Edmonton



Photo by R. E. Gehlert

Barred Owl male, Emma Lake, 1970.

On May 6, 1970, while checking a raven's nest at Emma Lake, I heard the distinctive call of a Barred Owl (*Strix varia*). I promptly located the calling bird in a spruce tree when a second owl was heard. A brief search of the area revealed a nest of a Barred Owl on top of a 20-foot decayed stump.

Both adults were captured and banded on May 9. A later attempt to reach the nest with a ladder in order to band the owlets was abandoned for fear of toppling the rotten tree. Consequently, the contents of the nest were never established, although on June 14

at least one downy young could be seen peering out of the cavity.

I also heard a Barred Owl at Misto-hay Lake in Meadow Lake Provincial Park on June 21, 1970.

The first Barred Owl specimen for Saskatchewan was obtained in 1959 (Houston, *Blue Jay*, 17:94) and the first nest was discovered in 1961 (Houston, *Blue Jay*, 19:114). The species had previously been reported in Saskatchewan as far west as Dore Lake (Folker, *Blue Jay*, 21:14) and north to Beaverlodge Lake (*Birds of the Lake Athabasca region, Saskatchewan*, Nero, 1963).



# BARRED OWLS AT MADGE LAKE, SASKATCHEWAN

by **Robert J. Long**, Saskatchewan Museum of Natural History, Regina

Records for the Barred Owl in Saskatchewan are few. The first specimen was taken in 1959 (Houston, *Blue Jay*, 17:94) and a nest was reported in 1961 (Houston, *Blue Jay*, 19:114). During this period, and up to the present time, there have been several reports of brief sightings.

Between July 21 and August 29, 1970, I made several observations on this species at Madge Lake, Saskatchewan. Barred Owl calls were heard frequently, and on several occasions I was struck by the prevalence of mid-day calling. I suspect that this was the result of weather conditions on those particular days. On several occasions I answered owl calls, but was unable to draw the bird closer. As a relative newcomer to the province, I was unaware that Barred Owls are rare here, so I made little attempt to follow up these auditory observations.

At 1:30 a.m. on July 29, I was awakened by loud calling near my quarters. I moved outside and set up a tape recorder with a parabolic reflecting microphone and recorded several calls. As I recorded, a second owl approached, and there resulted a noisy interaction — all of which is now on tape. Of course, I could not see the birds, but it appeared as though this was an interaction between territorial individuals.

On August 8, at 11:00 a.m., I came across an adult Barred Owl sitting in the middle of a secondary road. Thinking it to be injured, I stopped and approached the bird, but it flew off into the trees. I followed hoping to get some pictures, and found it sitting 25 feet up in a spruce. For 20 minutes I worked with the owl, moving around below it, and making several trips back to the car for different equipment. Throughout all of this, the owl merely watched as I moved, and appeared to lose interest if I stood still. It changed



Photo by R. J. Long

Barred Owl at  
Madge Lake, 1970.

position twice, flying about 50 feet each time. I left the owl sitting as calmly as I had found it.

Barred Owls are common in my home province of Ontario, yet I have never heard their calls as frequently as at Madge Lake. It would appear that there was a high density of these birds in the vicinity. This may have been a temporary local concentration, or it may indicate a trend towards increasing abundance of Barred Owls in Saskatchewan.



# RECORDS OF THE PARULA WARBLER IN ALBERTA AND SASKATCHEWAN

by **Spencer G. Sealy**, Museum of Zoology, University of Michigan,  
Ann Arbor, Michigan

The Parula Warbler (*Parula americana*) was added unequivocally to the check-list of Saskatchewan birds when an adult male was found by E. Manley Callin on the grounds of the Fort Qu'Appelle Sanatorium and photographed the next day by Fred W. Lahrman (Callin, 1956). The bird remained on these premises for eight days, from May 31 to June 8. An earlier sight record of a male at Emma Lake on June 27, 1939, by Farley Mowat and A. W. Frank Banfield was not published by Mowat (1947), apparently because the species had not been recorded previously in the province (Houston, 1958a). The province's third Parula Warbler record was obtained at the summer meeting of the Saskatchewan Natural History Society in Moose Mountain Provincial Park on June 14, 1959; here, not only was the adult male observed by many people attending the meeting but its song was also recorded (Gunn, 1959).

A fourth record of this species was obtained on October 21, 1965, when Mrs. Betty Binnie spotted a single Parula Warbler on the grounds of the Provincial Correctional Institute just east of Regina (Binnie, 1965). This bird was seen again by Mrs. Binnie on October 22 and on October 23 was observed by Regina birdwatchers, Margaret Belcher and the late Dr. Lucy Murray. The bird was last seen on the morning of October 24 when Robert W. Nero confirmed the identification.

The only Alberta record of this species is a specimen taken by D. A. Boag at the Alberta Biological Station, 20 miles west of Turner Valley, on June 6, 1958. The bird was an adult male (Boag, 1958). There are no records in Manitoba west of the southeastern corner of this province where Parula Warblers normally breed (Godfrey, 1966).

At noon on June 6, 1957, I observed

a male Parula Warbler at about 15 feet in Kindersley, Saskatchewan. The bird was observed for about 20 minutes as it moved among the branches of a poplar tree in the centre of the town. The identification was confirmed from Pearson (1936: plate 94) immediately after the observation was made. There was no doubt in my mind at the time that the bird was of this species.

The A.O.U. Check-List (1957:486) considered the Parula Warbler to be "casual to southern Saskatchewan (Sovereign)"; Godfrey (1966:325) cited this record and presented another one from McLean. Houston (1958b: 45) traced these records to the files of the United States Fish and Wildlife Service and was provided with details of them by Chandler S. Robbins (personal correspondence to Houston, January 16, 1958): "One seen at Bonniebrae, McLean, Saskatchewan, on May 10, 1935. Rare. One seen at Sovereign, June 5, 1930, by Beryl M. Dickson." As pointed out by Houston, these records are considered hypothetical. I contacted Robbins to obtain the sex of the birds involved in these observations and he stated (personal correspondence, October 7, 1970) that "the original records provide no further information than what we provided Dr. Houston."

Griscom and Sprunt (1957:98) give the normal breeding range of the Parula Warbler as extending "from southeastern Manitoba, central Ontario, southern Quebec, Maine, Prince Edward Island, south to eastern Texas, Louisiana, Mississippi, Alabama and central Florida." The status of the Parula in Alberta has to be designated as "accidental" (see Grinnell, 1922) on the basis of its single recorded occurrence in that province. Its status in Saskatchewan, however, is somewhat different. From 1930 to the present date (a span of 40 years) seven



Parula Warblers have been reported; thus, we have a mean of one observation every 5.9 years. This confers the status of "irregular visitant" (see Belcher, 1961:14) on the Parula in Saskatchewan.

Provided that the occurrence of Parulas in Saskatchewan has not coincided with the increase in the number of bird-watchers in the province, the possibility exists that it is expanding its breeding range. Griscom and Sprunt (1957:97) have pointed out that northern populations of this species "rarely nest anywhere except where the tree lichen, *Usnea*, occurs"; as Binnie (1965) stated, this lichen is prevalent throughout the northern coniferous forests of Saskatchewan. Thus, nest-sites would be available for this species in Saskatchewan provided that its other ecological requirements could be met.

It is interesting to note that all of the Parula records, except Binnie's sighting at Regina in October, were made in May and June; all of the birds whose sex was determined by the observer were males. Also, all of these records, except possibly the Alberta specimen and Emma Lake bird, were ecologically misplaced and have little immediate zoogeographical significance, since the birds were widely displaced from their typical habitat and probably had little if any chance of becoming established, even if females had been available. However, their importance may lie in the fact that they were possibly *en route* to suitable habitat in the coniferous forest where they might constitute a pioneering nucleus. Since no females have been observed (possibly because they do not sing and lack conspicuous coloration) in company with any of these males, it appears that these males were strictly irregular visitants and probably did not nest in Saskatchewan. However, such irregular visitants may indicate that the species is healthy and can afford to wager such high-risk pioneers; but, the success of such pioneering usually depends upon the numbers of individuals involved, the chances of an individual settler being very slim.

That the Parula Warbler is capable of locating suitable habitat and successfully raising young far away from its normal breeding range is demonstrated by its occurrence (Gould, 1957) and nesting (Williams, *et al*, 1958) in California. The latter authors observed at least three individuals in Point Lobos Reserve State Park, California, and just outside the park's eastern boundary almost daily from May 18 to July 16, 1952. Two nests were found, both situated in the tree lichen (*Romalina reticulata*), and it was ascertained that at least one young fledged from one nest and two from the other.

An extension of the breeding range of another wood warbler, the Golden-winged Warbler (*Vermivora chrysoptera*), in Ontario has been documented recently (Godfrey, 1969). This is a northeastern American species whose range also extends into the southeastern corner of Manitoba (A.O.U., 1957), and just recently this species was recorded in Saskatchewan (Brazier, 1962; Bard, 1968). Other warblers with northeastern American breeding ranges which also have been recorded recently in Saskatchewan are the Prothonotary Warbler (*Protonotaria citrea*) (Bobbitt, 1969) and Blue-winged Warbler (*V. pinus*) (Brazier, 1966). Thus, close scrutiny of warblers in Saskatchewan will possibly continue to turn up these eastern warbler species, and will sometime provide this province with its first breeding record of the Parula Warbler.

#### LITERATURE CITED

- American Ornithologists' Union. 1957. Checklist of North American birds. Fifth edition. Lord Baltimore Press, Baltimore. 691 pp.
- Bard, F. G. 1968. Taping the song of the Golden-winged Warbler. *Blue Jay*, 26:177-178.
- Belcher, M. 1961. Birds of Regina. *Sask. Nat. Hist. Soc., Spec. Publ. no. 3*. 76 pp.
- Binnie, A. 1965. Parula Warbler recorded near Regina. *Blue Jay*, 23:170.
- Boag, D. A. 1958. Parula Warbler and Indigo Bunting in southwestern Alberta. *Can. Field Nat.* 72:173-174.
- Bobbitt, D. G. 1969. Sighting of a Prothonotary Warbler in Regina. *Blue Jay*, 27:149.
- Brazier, F. 1962. A Golden-winged Warbler in Regina. *Blue Jay*, 22:153-154.
- Brazier, F. 1966. Saskatchewan's first specimen of the Blue winged Warbler. *Blue Jay*, 24:9-10.
- Callin, E. M. 1956. Saskatchewan's first Parula Warbler. *Blue Jay*, 14:90-91.
- Godfrey, W. E. 1966. Birds of Canada. *Nat.*



Mus. Canada Bull. no. 203. Biol. Ser. no. 73. Queen's Printer, Ottawa. 428 pp.  
 Godfrey, W. E. 1969. The Golden-winged Warbler in Muskoka County, Ontario. Can. Field-Nat., 83:281.  
 Grinnell, J. 1922. The role of the "accidental." Auk, 39:373-380.  
 Griscom, L., and A. Sprunt, Jr. 1957. The warblers of America. Devin-Adair, New York. 356 pp.  
 Gould, F. J. 1957. Specimen of Parula Warbler from southern California. Condor, 59:210.  
 Gunn, W. W. H. 1959. Song of Parula Warbler (*Parula americana*) recorded at Moose Mountain Provincial Park. Blue Jay, 17:114-115.

Houston, C. S. 1958a. Record of Parula Warbler at Emma Lake, June, 1939. Blue Jay, 16:158.  
 Houston, C. S. 1958b. An evaluation of the distribution records for Saskatchewan birds in the revised edition of the A.O.U. Checklist. Blue Jay, 16:44-47.  
 Mowat, F. W. 1947. Notes on the birds of Emma Lake, Saskatchewan. Can. Field-Nat., 61:105-115.  
 Pearson, T. G. 1936. Birds of America. Doubleday and Company, Inc. 289 pp.  
 Williams, L., K. Legg, and F. S. L. Williamson. 1958. Breeding of the Parula Warbler at Point Lobos, California. Condor, 60:345-354.

## FIRST SIGHT RECORD OF THE BAND-TAILED PIGEON IN SASKATCHEWAN

by **Wayne Renaud**, Box 327, Rosetown

On August 6, 1970, at 8:00 a.m. my brother Don glimpsed a strange pigeon as it flushed with a flappy flight from our bird bath near our house in Valley Centre, 18 miles north and seven miles east of Rosetown, Saskatchewan. The bird flew north and alighted in a maple in the neighbouring yard and, although the bird had perched in the green foliage, the head, neck and back were visible. Don immediately obtained 7x50 binoculars and observed the bird from as close as 40 feet in bright, hazy sunlight. The white nape crescent was clearly seen for the pigeon had its back to the observer and light was shining directly on the bird.

The pigeon was then frightened to a grove of poplars about 400 yards to the west where it perched at a height of about 40 feet among dead poplar branches. Again the observer was able to approach to within 60 yards and he noted the dark primaries, the lighter grey back and the dark median line on the square tail. The pigeon was observed intermittently for about 15 minutes before the observer left the area.

No further attempt was made to study the bird until that evening when I took binoculars and searched the trees in Valley Centre. The bird was finally located at 7:40 p.m. as it perched on a dead poplar branch in a grove of poplars and maples by a farm at the north end of town. Here I was able to approach to within 50 yards of the bird, and the neck crescent, square,

banded tail and general stocky, pigeon-like appearance were clearly evident. I studied the bird for 10 minutes; then I left and returned at 8:20 with my brother. By then, the bird had moved to the top of another dying poplar a few dozen yards away from its previous perch and appeared to be resting for the night. Again we approached the bird, this time no closer than within 65 yards. While we watched, a pair of Mourning Doves (*Zenaidura macroura*) came to perch in the same tree as the pigeon; by comparison the pigeon was about twice as broad and slightly longer. The bird was on the same branch when we departed at 8:40.

Although I searched the area thoroughly the following day I could not relocate the pigeon.

All the field marks point to its being a Band-tailed Pigeon (*Columba fasciata*), a species not previously recorded in Saskatchewan. Godfrey (*Birds of Canada*, 1966, p. 206) gives the range of this species as "southwestern British Columbia", thus placing this record some 600 miles out of its normal range. Bent (U.S. Natl. Mus. Bulletin #162) states that "Band-tailed Pigeons are rarely taken outside of their range" and indeed there appear to be only two other Canadian records, both from Alberta, one a specimen secured July 27, 1967 at Leduc, and the other a sight record of a bird observed August 16, 1968 west of Calgary (See *Blue Jay*, 26:181, December, 1968).



# REVIEW OF 1969 SASKATOON BIRD OBSERVATIONS

by J. B. Gollop, Canadian Wildlife Service, Saskatoon

This is a summary of the more interesting records from Volume 4 of the *Saskatoon Bird Review*. The Saskatoon District is a 3,600-square-mile block within approximately a 35-mile radius of Saskatoon. The period covered is from December 1, 1968, through November 30, 1969. Winter is defined as December 1, 1968 - March 15, 1969; spring is March 16 - May 31; and fall, June 1 - November 30. The records received are shown in Table 1.

Compared to 1968, there were significant increases in the number of reports for each period but a decrease for the spring. While 32,000 records is a commendable and impressive figure for four years, we find that there are adequate breeding records for fewer than 10 of the 130 species that probably breed in the district. No breeding records are on hand for at least 15 species believed to nest regularly: Pigeon Hawk, Ruby-throated Hummingbird, Hairy Woodpecker, Western Wood Pewee, Swainson's Thrush, Red-eyed and Warbling Vireos, Tennessee Warbler, Ovenbird, Rose-breasted Grosbeak, Grasshopper Sparrow, Slate-colored Junco, White-throated Sparrow, McCown's and Chestnut-collared Longspurs.

**Contributors:** Nine parties contributed about 75 per cent of the records: Mrs. W. R. Early, Mr. and Mrs. G. Galloway, Dr. and Mrs. J. B. Gollop, Mr. and Mrs. J. D. Hogg, Dr. and Mrs. C. S. Houston, Mrs. L. M. Hoyte, S. J.

Shadick, Miss L. P. Strom and Mr. and Mrs. J. A. Wedgwood. Another 15 per cent of the 1969 records were from seven parties submitting 200 - 500 records each: Mrs. S. J. Aldous, Dr. and Mrs. C. A. Chamberlain, R. E. Gehlert, Mr. and Mrs. W. S. Richards, J. F. Roy, Mr. and Mrs. L. G. Turner and D. W. Whitfield. However, records are not all of equal value and breeding records deserve special mention. Most of these came from a handful of hard workers: Bob Gehlert, Stuart Golly, Stuart Houston, Jim Slimmon, Fred Waite and Doug Whitfield. The editor wishes to thank Bill Richards, Mrs. T. R. Smith and Cliff Matthews who have assisted significantly in the preparation of the *Bird Review* and the Canadian Wildlife Service which has again handled the typing. Shirley and Jim Wedgwood and Muriel Galloway have begun the formidable job of compiling the first four years' data.

**Breeding:** Eighty species were found breeding in 1969. Six species made up more than half of the 608 nests, broods and coveys: Mallard (148), American Coot (124), Pintail (52), Marsh Hawk (25), Great Horned Owl (25) and Long-eared Owl (25). There were more nests and broods than usual of all duck species (except American Widgeon and Canvasback), Marsh Hawks, American Coots, Long-eared Owls, Short-eared Owls (20) and Saw-whet Owls (3). Special mention must be made of 50 Tree Swallow nests found in bird

Table 1. Summary of Saskatoon bird records.

	1968-1969				1969	1968	1966-1969
	Dec. 1-Mar. 15	Mar. 16-May 31	Mar. - Sept.*	June 1-Nov. 30			
Records .....	1,811	4,394	608	5,024	11,837	9,571	32,822
Cards .....	578	1,505	397	1,507	3,987	3,994	14,635
Contributors .....	53	51	54	53	101	97	210
Species .....	44	195	80	210	230	230	252

\* Breeding records only.

boxes erected in the spring of 1969 by the Saskatoon Junior Natural History Society. Three species not suspected of breeding in the district were found: a brood of Bufflehead at Pike Lake on July 12, a Say's Phoebe's nest with three young near Dundurn on July 1, and a redpoll's nest with three young (which died) and one egg in Saskatoon on April 30. (The redpoll has been written up by Hans Blokpoel for publication.) The first nests in at least four years were found for seven other species: Belted Kingfisher (first record), Black-capped Chickadee, Veery, Orange-crowned Warbler (first), American Redstart, Yellowthroat and Rufous-sided Towhee (first, newly-fledged young).

In 1969 for the first time two brown-plumaged Marsh Hawks (male and female, trapped and banded) are known to have reared a brood in the Saskatoon district. There were also at least five cases of brown-plumaged birds observed in full courtship flight.

**Spring:** The major daytime migrations were reported for crows on April 5 and 6, for hawks and eagles on April 12 (50+) and 13 (190), for geese, shorebirds, blackbirds, some Franklin's Gulls and a few swallows on May 4, 9, 10 and 11. The only major wave of night migrants occurred on May 15 and 16; particularly noticeable were Hermit, Swainson's and Gray-cheeked Thrushes, Northern Waterthrushes and some other warblers, Harris's, White-crowned, Fox and Lincoln's Sparrows.

Several species were reported more commonly in spring than usual: Rough-legged Hawk, Bald Eagle, Sandhill Crane, Piping Plover, White-rumped Sandpiper, Saw-whet Owl, Red-breasted Nuthatch, the above three thrushes and Northern Waterthrush. Other species appeared to be less common: there were no Rusty Blackbirds reported, and Pine Grosbeaks, Tree and White-crowned Sparrows were fewer in numbers. Lark Buntings were reported only from May 17 to June 8.

While Snowy Owls were in usual numbers through the winter of 1968-69, there were fewer in the spring and fall of 1969. Short-eared Owls were

much more common in 1969 than in 1968: 103 birds reported December 1 - January 18, none January 19 - April 7, 422 from April 8 - August 31, and 5 from September 1 - November 30. Although there were fewer Bohemian Waxwings than usual during the winter, there were more both in spring and fall. Redpolls were much more common in winter, spring and fall. There were no Pine Siskins reported from February 9 to June 5 but they were noticeably more common from then until October 25.

**Fall:** Northern Phalaropes, Yellow-bellied Sapsuckers, Red-breasted Nuthatches, Brown Creepers, Evening and Pine Grosbeaks, Red- and White-winged Crossbills, Harris's, Fox and Swamp Sparrows occurred in larger numbers than usual. The main visible migrations were noted as follows: hawks on October 7, 11, 12 and 13 (192 birds in total), nighthawks on August 19 and 20 (56 birds) and crows on September 28 (6,740 birds in 1½ hours). Night migrants showed up primarily in one major wave, October 5, 6 and 7, which was even more pronounced than the May wave: Robins, Hermit, Swainson's and Gray-cheeked Thrushes, Myrtle and Palm Warblers, Northern Waterthrushes, Yellowthroats, Slate-colored Juncos, Tree, Harris's, White-crowned, White-throated, Fox and Swamp Sparrows. On September 13, more than 11,000 crows flew into a roost near Strehlow. Marsh Hawks remained particularly late the previous fall, seven birds being seen on five December dates, including two on the 21st.

**Large Numbers:** For 23 species, the largest flocks, concentrations or one-day counts (by one party) ever recorded around Saskatoon were reported. (Largest one-day counts are in bold type.) The following counts were associated with two of the recently created reservoirs, Blackstrap and Bradwell: 8 Common Loons on June 21; > 309 Western Grebes on September 20; 32 Pied-billed Grebes on August 30; 25 Great Blue Herons on August 30; 37 Black-crowned Night Herons on September 9; 3,850± Lesser



Scaup on October 11; >175 Common Goldeneye on November 1; >75 Bufflehead on October 11; 420± Ruddy Ducks on September 20; 115 White-rumped Sandpipers on May 31; 105 Sanderlings on May 31; and >35 Bonaparte's Gulls on October 11. Other high counts were >12 Semipalmated Plover on May 19; 6 Piping Plover on May 5; 53 Black-bellied Plover on May 24; 32 Willets on August 30; 86 Greater Yellowlegs on September 20; 7 Knots on May 24; 173 Marbled Godwits on August 23; >200 Barn Swallows on September 7; 3 Mourning Warblers on May 24; 10 Yellowthroats on May 28, and 100± Common Grackles on September 6.

**Stragglers and Rarities:** Thirty-four species were reported on only one or two days during the 12-month period. There was a single bird on each date unless otherwise noted in parentheses. Blue Goose, April 13 (4) and 20 (2); Black Duck, August 20; White-winged Scoter, June 22 (4) and November 8; Hooded Merganser, September 20 (4); Turkey Vulture, April 13; Goshawk, November 1; Prairie Falcon, October 27; Peregrine Falcon, August 3 and 31; Whooping Crane, October 4 (9); Virginia Rail, June 13; Dunlin, May 19 and 24 (2); Buff-breasted Sandpiper, May 23 (3) and 24 (25+); Hudsonian

Godwit, April 28 and May 23; Forster's Tern, October 11; Hawk Owl, January 5 and March 8; Boreal Owl, February 10; Red-shafted Flicker, April 6 and June 28; Traill's Flycatcher, June 3 (3) and 6; Olive-sided Flycatcher, May 24 and June 6; Purple Martin, May 24 (4); White-breasted Nuthatch, December 26; Long-billed Marsh Wren, May 24; Short-billed Marsh Wren, May 24; Mockingbird, October 6; Townsend's Solitaire, October 13; Nashville Warbler, May 15 and 16; Blackburnian Warbler, October 13; Chestnut-sided Warbler, September 7; Bay-breasted Warbler, October 6; Mourning Warbler, May 24 and 28; Canada Warbler, August 20 and September 19; Grasshopper Sparrow, May 24; Sharp-tailed Sparrow, July 13 and 14 (4), and McCown's Longspur, May 24 (11).

**Miscellaneous:** There was a new species for the district: a Varied Thrush in the city on October 8, 10 and 11.

An orange-dyed swan (from Chesapeake Bay) was seen migrating northwest on May 4 and four dyed birds spent several days in May on a slough on the city's outskirts. Two partial albino Myrtle Warblers were reported, one on May 17 and one on October 5.

## UNUSUALLY LARGE NUMBERS OF ROSS' GEESE OBSERVED AT LAST MOUNTAIN LAKE

by **F. W. Lahrman**, Saskatchewan Museum of Natural History, Regina

On September 27, 1970, I observed flocks of Ross' Geese departing from the north end of Last Mountain Lake near Watertown during their evening flight to the stubble fields to feed. In past years, I have seen a few individuals or small flocks numbering up to 50 birds. (See *Blue Jay* 15:165, December, 1961). This evening, however, I estimated the total of birds in flocks that passed by close enough for identification to be well over 1,000. I counted 300 in one flock, but the usual number per flock was 30 to 50. Most of the

Ross's were flying in flocks of their own species, but a few were accompanied by White-fronts or Snows, and at times, a few Ross's accompanied flocks of White-fronts.

It is interesting to note that on this date, eight Ross' Geese were also seen at Deep Lake (five miles south of Indian Head) by Lorne Scott. From previous observations, we consider Deep Lake to be a very important breeding and resting area for a great variety of waterfowl, and it is to be hoped that it will remain a protected

area for wildlife the year around.

On October 3rd and 4th, I again saw Ross' Geese on Last Mountain Lake, west of Govan, though in somewhat fewer numbers than those observed on September 27. This may simply mean that I was not in an area where the majority were resting. John Hatfield, Project Manager of the Last Mountain Lake Wildlife Refuge, has since told me that he also observed unusually large numbers of Ross' Geese at the north end of the lake from September 20 to October 10, 1970. Most of the geese left the area October 8 during a weather front moving in from the northwest with strong, gusty winds.

I was aided in the identification of the Ross' Geese by their call which is quite distinctive from that of the other species, and I was fortunate enough to obtain a tape recording of their voices.

### **POSSIBLE WILD HYBRID OF THE WHITE-FRONTED X SNOW GOOSE**

by **F. W. Lahrman**, Saskatchewan Museum of Natural History, Regina

On October 4, 1970, while observing geese and cranes at the north end of Last Mountain Lake, northwest of Govan, I noticed a strange colored goose flying with a flock of approximately 35 White-fronted Geese around 10:00 a.m. The flock alighted on a stubble field only one-quarter of a mile away, where I was able to observe this goose with a 30x telescope. On checking later, I was surprised to note that it had a marked similarity to the two geese described by Alex Dzubin of the Canadian Wildlife Service (*Blue Jay*, 22:101-107).

#### *Description of the Goose*

Silhouette, size, head, bill, neck and body proportions appeared to be similar to that of the White-fronts; bill — orange; head and neck — dark gray; broad white forehead patch and a light cheek patch. The gray of the neck fused into a white breast near the base of the neck; entire underparts—white. The back from base of tail almost to base of wings — white (observed when bird was in flight). At rest, the bird

appeared to be gray above and white below. The tail was dark gray. The wings appeared to be similar to those of the White-fronts. I was unable to see the color of the legs or to determine whether it had a dark grinning patch on the bill such as the Snow Geese have.

I do not think that this was a partial albino White-front because the darker colors were slate-gray rather than the gray-brown of the White-fronts.

Several Snow and Blue Geese were observed in the area but they were not associated with this flock.

### **Information Wanted on Colour-marked Bald Eagles**

As part of a project designed to learn more about the migration of Saskatchewan's Bald Eagles, the tails of 16 nestlings were painted orange this past summer. If you see or hear of one of these marked eagles, please contact D. Whitfield, 415 10th Street E., Saskatoon.

### **FIELD NOTES REPORTS**

The new regional editor for AUDUBON FIELD NOTES is C. Stuart Houston, 863 University Drive, Saskatoon. All birdwatchers on the prairies are asked to submit their seasonal observations regularly to allow an overall picture of bird distribution and abundance. Notes on the common species with dates and numbers are more desirable than observations of rarities. Data on fall migration are due December 10, winter season April 10, spring migration June 10 and nesting season August 10.

### **NEST RECORD CARDS**

Please send Prairie Nest Record Cards in to the Prairie Nest Records Scheme, c/o The Manitoba Museum of Man and Nature, 190 Rupert Avenue, Winnipeg 2, Manitoba, as soon as possible, so that the 1970 summary can be prepared.



# DIRECT OBSERVATION OF SHREW PREDATION ON INSECTS AND FISH

by **Charles H. Buckner**, Department of Fisheries and Forestry, Ottawa

Shrews are extremely secretive in their habits and detailed observations of their behaviour under natural conditions are only rarely made. At times, however, their above-ground activity is relatively intense during daylight hours and one can observe at first hand their modes of hunting. The following observations were recorded while the author was investigating the ecology of shrews in Manitoba.

On June 27, 1958 a group of seven Cinereous Shrews, *Sorex cinereus cinereus* Kerr, was observed hunting resting butterflies, the Great Spangled Fritillaries, *Argynnis cybele*. Observations commenced at 5:30 a.m. CST and lasted about an hour. Air temperature was approximately 45°F, skies were clear, and wind was calm. The fritillaries, obviously only recently emerged, had congregated on the mud flats of a small pond near Jessica Lake, Whiteshell Provincial Park, Manitoba, and seemed in a state of semi-torpor when first observed. Several of these butterflies were captured easily by hand by the author before a group of seven shrews, apparently two adults and five juveniles, was noticed. The juveniles were huddled under a piece of log about five inches in diameter and 18 inches long, and did not participate in the hunting. The adults were making rapid darts from the log to the place where a fritillary was resting, and then dashing back to the log with the prey. All shrews shared in the subsequent feeding. Consumption of the insects was rapid: in a matter of several seconds all that remained were the wings. When observations commenced, the shrews were reacting to prey within about 25 feet from the log under which the young shrews sheltered. However, the supply of fritillaries soon became exhausted in this small area and the hunting shrews ranged farther away. On these forays they would dart from one place of cover to another,

taking advantage of logs, sticks, leaves, stones and plants. The pattern of capture was always the same—the hunter would dash directly towards its prey from distances of approximately four feet to 20 feet from the point of cover. When the shrew reached a point roughly 18 inches from the prey, it would leap about six inches into the air and land with all feet extended on the prey insect. Occasionally the prey insect would begin to take flight, in which case the strike would be effected in the air. After being under observation by the author for approximately one hour, during which time they were oblivious to the observer, the shrews dashed from their log shelter into the adjacent mixed wood stand. The wing remnants were gathered, and it was estimated that the two hunters had captured 134 fritillaries. The site was visited upon numerous occasions thereafter, but a repetition of these events was not observed.

On another occasion, at about 7:30 a.m. CST, on September 7, 1961, in a moist, grassy meadow bordering a tamarack bog near Telford, Manitoba, two subadult Saddle-backed Shrews, *Sorex arcticus laricorum* Jackson, were observed hunting. This time the prey insect was the grasshopper *Melanoplus femur-rubrum*. Again the air was cool (approximately 42°F.), the sky clear, and the winds calm. The prey insects were observed in large numbers resting on stems of grasses and sedges. Only slight activity of the hoppers was noticed, and this was usually confined to walking slowly up the stems upon which they were resting. The shrews were observed to climb slowly up an adjacent plant about 10 inches from the intended prey. Frequently the insect would be disturbed and jump, and the shrew would then approach another insect. When the hunter was approximately 12 inches above the ground, it would jump vio-

lently at the prey, grasping with jaws and feet. Once the strike commenced, the predator rarely missed its prey. Within about a 15-minute interval 37 strikes were observed, of which 33 were successful. The predator would rapidly consume the insect, leaving only the wings and legs. Eventually the prey insects became more mobile and began to jump away immediately they were approached. The shrews attempted only about six captures under these circumstances and then disappeared into underground runways.

I am indebted to Mr. Glen Parsons, Conservation Officer, Manitoba Forest Service, Rennie, Manitoba, for the following account. Mr. Parsons, while on a canoe trip on the Winnipeg River, June 16, 1956, journeyed on foot at about 4:30 p.m. up a small stream near the Ontario boundary. The stream had numerous falls, and below each falls was a small pool, perhaps 30 feet in diameter. These pools were occupied by larger numbers of Common Shiners, *Notropis cornutus fontinalis* (Agassiz). Most of the minnows were about 2½ inches in length. While resting at the foot of one of these falls, Mr. Parsons noted what appeared to be a much darker fish darting between the rocks near the turbulent area between falls and pool. Eventually the animal emerged from the water with a shiner in its mouth. This animal was clearly

a Water Shrew, *Sorex palustris navigator* (Baird), and was observed for approximately 15 minutes. During this period, the shrew captured three shiners and consumed them on a rock at the base of the falls. The shrew would remain clinging to the shady side of a rock at the water-air interface. When a minnow approached to within about six inches, the shrew would submerge and swim quickly to its prey, attacking from below and in the belly section of the prey. The predator would then return to a rock, quickly subdue the fish, and eat parts of the head and viscera. Much of the remainder was rejected. The observer recounted that the actual strike was extremely swift and could only be observed when a close watch was made. The observer considered that the prey fish were apparently weak or injured, and that "normal" minnows were ignored.

A significant component of these observations is the evident use of vision in the diurnal hunting activities of these shrews. It is commonly believed that shrews have very poor vision and do not rely on sight for capturing prey. It would seem from these observations that the vision of shrews is more acute than has been supposed, and that it can be used in hunting. It seems unlikely in these sets of observations that any other sense was involved in locating and reacting to the prey.



Shrew attacking butterfly

Drawing by J. A. Drovín



# NOTES ON DISTRIBUTION OF MYOTIS LEIBII IN EASTERN MONTANA

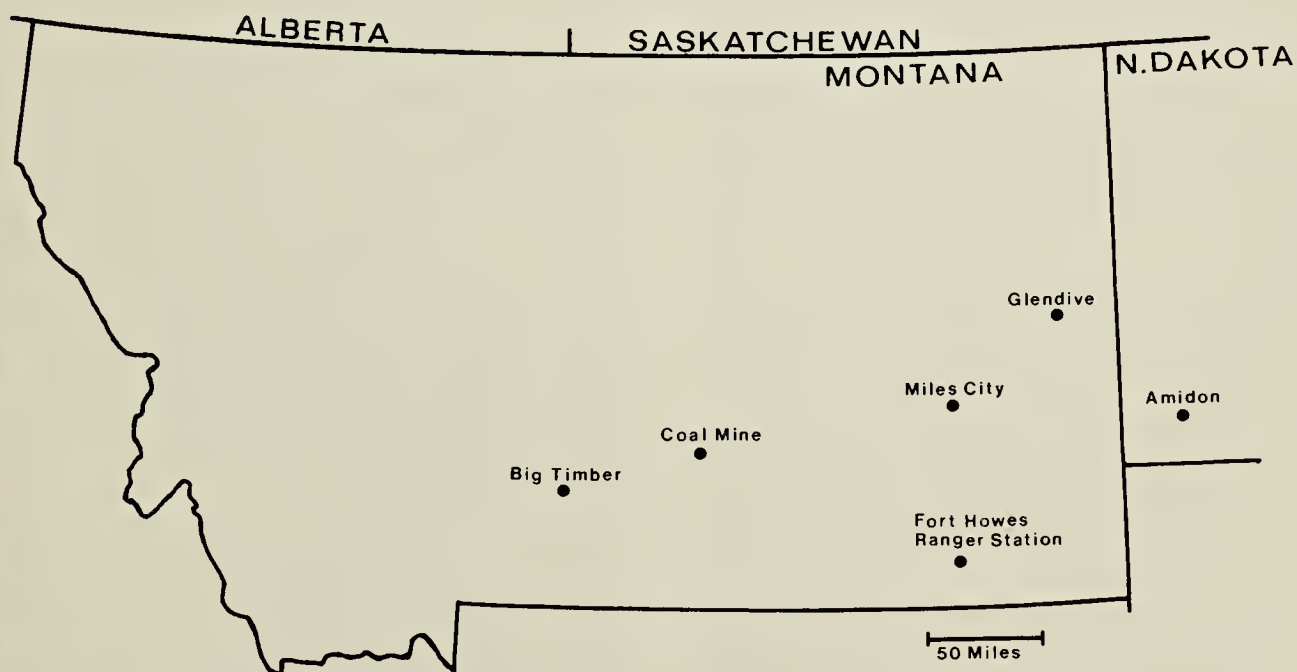
by Jon E. Swenson, Shepherd, Montana

The range of the Small-footed Bat (*Myotis leibii*) in eastern Montana is poorly known and the occurrence of this species in Montana needs further documentation (Hoffmann and Pattie, 1968). *M. leibii* has previously been collected at only three localities in Montana east of the continental divide in Miles City, Custer County (Hall and Kelson, 1959), Big Timber, Sweet Grass County, and two miles west of Fort Howes Ranger Station, Powder River County (Hoffmann, *et al.*, 1969). Two other locations, Miles City, and a site eight miles north and 7.5 miles west of Amidon, Slope County, North Dakota (Jones and Stanley, 1962) represent the marginal records of the known range of *M. leibii* in this area.

A single male *M. leibii ciliolabrum* was captured alive in a building in Glendive, Dawson County, Montana (elevation 2,070 feet), by Art Barz on August 19, 1968. I received the bat on August 20, 1968 and preserved it as a study skin and skull, which have been deposited as no. 4975 in the Montana State University Zoological Museum

at Bozeman. The measurements are: total length, 82 mm; length of tail, 35 mm; length of hind foot, 7 mm; length of ear from notch, 15 mm; and testes, 3 x 2. The bat weighed 3.5 grams when I obtained it. This locality represents a range extension of about 75 miles northeast of Miles City and about 75 miles northwest of Amidon.

On March 18, 1970, 14 *M. leibii* ssp. were found hibernating in an abandoned coal mine 20 miles south of Roundup, Musselshell County, Montana (elevation about 3,300 feet). Twenty-two Western Big-eared Bats (*Plecotus townsendii pallescens*) were hibernating in the same mine, but the entire mine was not searched. Four *M. leibii* (three males and one female) were collected. Two of the specimens were deposited in MSUZM, one in the University of Montana Zoological Museum at Missoula, and one in the private collection of D. P. Hendricks. This locality does not represent a range extension, but it helps fill the hiatus between Miles City, about 130 miles east by northeast, Big Timber, about



COLLECTION LOCALITIES OF  
MYOTIS LEIBII

180 miles southwest, and Fort Howes Ranger Station, about 125 miles southeast of the coal mine.

These two observations help support the belief of Hoffmann, *et al.*, (1969) that *M. leibii* probably occurs throughout the state.

I would like to thank Mr. Barz and Mr. Don MacDonald for bringing the *M. leibii* specimen to me, D. P. Hendricks for helping me collect and preserve the bats collected in the mine, Dr. Robert E. Moore for reviewing the

manuscript, and Dr. J. Knox Jones for referring the specimens to subspecies.

#### LITERATURE CITED

- Hall, E. R., and K. R. Kelson. 1959. The mammals of North America. Ronald Press, New York. 1: 1-546.
- Hoffmann, R. S., and D. L. Pattie. 1968. A guide to Montana mammals; identification, habitat, distribution and abundance. Univ. Montana Print Serv., Missoula. 133pp.
- Hoffmann, R. S., D. L. Pattie and J. F. Bell. 1969. The distribution of some mammals in Montana. II. Bats. *J. Mammal.*, 50:737-741.
- Jones, J. K., Jr., and W. C. Stanley. 1962. *Myotis subulatus* in North Dakota. *J. Mammal.*, 43:263.

## Junior Naturalists

Edited by **Joyce Deutscher**, 7200 6th Ave., Regina

### DOG WITH OVER 600 PORCUPINE QUILLS

by **Rosemary Nemeth**, age 15, Yellow Creek

I never knew how deadly porcupines could be until an incident happened.

I usually go for a walk in the fall through the bush. I just can't resist the beauties the bush has to offer. Puppy, our dog, always comes along with me wherever I go. Puppy is about six inches high and about a foot and a half long.

First we went to a slough. We walked around the slough trying to see if there were any new muskrat houses. We saw one muskrat house which the muskrats had been working on. Then I decided to go to another slough about a quarter of a mile from the first slough.

To get to the second slough we had to walk across a stubble field and on the stubble field was a little bluff of trees. Puppy ran into this bluff. I didn't really pay attention to where he went because he usually wanders off when he wants to, but he always comes back to me.

Then all of a sudden I heard a terrible cry. The first thing that struck me was to run. I ran for a short distance, stopped and called for Puppy but he didn't come. So I went home

and told my mother what happened. She told me, "Don't worry, he'll come home". But I didn't believe her, so I started to go back to where I had left Puppy.

Dad and my brothers were hauling bales and they drove in front of me. I saw Dad stop and then I saw Puppy. Puppy's whole side was white with porcupine quills. Dad and my brothers went to him. By the time I got there, Dad and my brothers had started to pull some quills out, but because it was impossible to get many of them out, we took Puppy to a veterinarian.

The vet put Puppy to sleep and he and my brother started to pull quills out with a certain kind of tool. It took about half an hour to get all the quills out they could find. The vet said you could never get all the quills out. The vet estimated Puppy had about 400 quills and my Dad and my brothers pulled out about 200 quills before we took Puppy to the vet. Then the vet gave Puppy a penicillin shot to prevent infection.

For a few days Puppy was pretty stiff. But he managed to pull through and now he is just as good as ever. I hope this never happens again because I know how some poor wild animal has to suffer with porcupine quills before it dies.



A YOUNG BIRD ENTHUSIAST

by Lane Harris, age 8, Kindersley

My mother will help me with this letter as I am only in grade three and eight and one-half years old. I write to tell you of my summer adventures with birds.

On June 21st I got up at 3:30 a.m. and travelled with my mother and friend on a breeding bird survey. We saw or heard 997 birds representing 47 different species.

I also recorded 17 nests on a nesting bird survey. Of these the most interesting was a Swainson's Hawk. We visited the nest in May and found 3 eggs ten feet up in the crotch of a poplar tree. My mother took pictures each trip 'til August 16th, when only one of the three birds remained. This one left the nest soon after this date.

This is the first year I have helped with bird work, and I am already looking forward to next year.

TENTH ANNUAL REPORT OF THE BRANDON JUNIORS' NESTING PROJECT

by John Lane and Vern Bauman, Brandon, Manitoba

Our 1970 nestbox report features a marked jump in the Eastern Bluebirds, *Sialia sialis*; a mysterious malady that attacked and killed many partly-fledged Mountain Bluebirds, *Sialia curruoides*; important extensions of our "satellite nestlines"; and a start on a banding program with 1300 Mountain and over 300 Eastern Bluebirds banded during the nesting season.

After their usual slow start, Eastern Bluebirds appeared in surprisingly large numbers at our nestboxes, due largely to the new Trans - Canada Highway nestline, running east to a point beyond MacGregor, Manitoba. We found that the farther east we went on this line the more plentiful the Eastern Bluebirds became, and the scarcer the Mountain Bluebird. None of the latter species was found in our nestboxes east of Austin, Manitoba.

In an area roughly bounded by Griswold and Oak Lake on the north and by Souris and Hartney on the south, first-brood baby Mountain Bluebirds died by the nestful from some cause as yet undetermined. Between 40 and 75 nestboxes were affected with an estimated loss of 200 to 350 bluebirds. Only Mountain Bluebirds were affected, and we found no evidence of this malady in second-brood nestings. Insecticide poisonings are suspected.

In 1969 Ed Robinson of Wawanesa, Manitoba, offered to set out and care for 35 of our nestboxes, and in 1970 he took another 15. Also this year the Rev. H. Dykman of Kenton, Manitoba, set out 50 of our boxes, and two Souris, Manitoba, men, Stan Giles and Art Michie, built and set out 50 nestboxes in the Souris area. All of these nestboxes bear our numbers and all are included in our yearly totals. Giles and Michie are already planning further extensions to their satellite nestline.

On the other hand, we were obliged to abandon the "Brandon-Gladstone-Austin" nestline set out during the winter of 1968-69. House Sparrows, much in evidence even in 1969, the first year of operation, were found in 1970 to have occupied over half the 100 nestboxes that comprise this nestline. Last year we listed nine Mountain Bluebird and three Eastern nestings from this nestline; this year we found just one certain nesting of the Mountain Bluebird, and none of the Eastern species. We are salvaging many of the nestboxes from this line, and propose to set them out on a new line running between Carberry and Glenboro, Manitoba.

From an estimated 2400 nestboxes in operation during the 1970 season, we list the following results:

Nesting totals for 1970

Mountain Bluebird (first broods)	435
Eastern Bluebirds (first broods)	113
Tree Swallow (estimated) .....	1200
House Sparrow .....	69
House Wren .....	30
Starlings .....	14
Deer Mouse .....	27
Red Squirrel .....	1



## ANNUAL REPORT OF THE INDIAN HEAD BLUEBIRD TRAIL

by Lorne Scott, Indian Head

April 5, 1970 marked the completion of the longest bluebird trail in the world. On that day, the Saskatoon Junior Natural History Society extended their trail to Raymore, Saskatchewan to meet mine, which in turn links up at Broadview with the trail established by John Lane and the Brandon Junior Bird Club. Thus was completed a continuous line of bird houses from Beaver Creek, south of Saskatoon, to MacGregor, Manitoba.

After working on the bluebird project for the past eight years, I now have over 1000 nest boxes. Despite the late spring, Mountain Bluebirds again showed an increase in numbers. In 1969 they occupied 104 houses, and this year 156 houses were used by Mountain Bluebirds. I banded 600 Mountain Bluebirds this past season; of these 63 were adult females and one was an adult male (the first I have banded). Eight bluebirds banded as adult females last year were caught again this year while sitting on nests. Two of these were re-caught in the same house where they were banded



Last link in the Saskatoon - Indian Head Bluebird Trail.

Photo by Gary Seib



last year. Five were caught within one mile of where they were banded last year, and one was four miles away. It is interesting to note that none of the 357 young bluebirds banded last year were found nesting in any of the houses this year. During the past two years I have banded 1000 bluebirds.

The Tree Swallows also had a successful year despite the fact that House Sparrows occupied many of the older houses. This year there were at least 325 houses occupied by Tree Swallows, compared to 275 in 1969. A total of 850 Tree Swallows was banded this past season, bringing the two-year total to 1450. There were 123 adult female Tree Swallows banded this year, and 19 of the 125 banded last year were re-caught on nests. Most of them were re-caught within a mile of where they were banded or at the same nest, but one was nesting 75 miles away. Again it was interesting to note that none of the young Tree Swallows banded last year were found nesting in any of the houses.

### SASKATOON JUNIORS' BLUEBIRD REPORT, 1970

by Michael Bantjes and David V. Houston,  
Saskatoon

The Saskatoon Junior Natural History Society was formed in November 1968, with seven members between the ages of 10 and 14. It was formed to enable the younger members of the Natural History Society to have active participation in various phases of natural history. We now have over 20 members.

Our main project over the last two years has been the construction and maintenance of a bluebird box trail. It extends from Saskatoon to Raymore with a total of 368 houses, spaced about one-third of a mile apart. The boxes were placed four feet above the ground and at least 100 yards from trees, and 200 yards from farmyards when possible.

During the breeding season we were able to check all the 182 houses within the Saskatoon area (which extends 20

miles east of Hanley) and 55 houses west of Raymore, leaving 131 intervening houses unchecked. Occupancy was as follows:

	Saskatoon	Raymore
Tree Swallow .....	130	38
Mountain Bluebird ....	8	0
House Sparrow .....	11	6
Empty all year .....	15	2
Damaged or destroyed	22	9
Used by two species ...	—4	..
Total .....	182	55

We were encouraged by the Mountain Bluebird's increase from three to eight pairs, compared with 1969.

### A REPORT FROM ST. CHAD'S GIRLS' SCHOOL OUTINGS CLUB

by Jane Richardson, Semans

The school year of 1969-70 was the second and final year of the St. Chad's Outings Club. Its life was only brought to an end because the school was forced to close. All members of the club would like to thank Lorne Scott of the Museum of Natural History in Regina for his leadership and interest in the club. Thanks also goes to the Sisters for their assistance and guidance within the Outings Club.

Our activities were varied and took place at all hours. For example, last October at 5:30 in the morning, eleven of our members visited the Fred Bard Nature Refuge near Regina. Here Whistling Swans were observed resting during their long migration south. Prairie Dogs, which many of the girls had never seen before, were active in the early morning. We also visited the Interpretive Centre before returning to the city and a day of classes.

November started out with the club attending an Audubon Screen Tour film sponsored by the Regina Natural History Society and the Museum. Later in the month a field trip was taken to Lake Marguerite which is located south of Indian Head. The highlight of the trip was discovering several bison skulls and bones along the lake shore. Beaver work was also discovered in cut





Members of the St. Chad's Outing Club, 1970

trees, canals, stockpiles of winter food and a large lodge.

During the winter months we visited the Wascana Marsh to feed the geese. Natural History meetings and Pollution Probe meetings were attended. In February some members went to Moose Jaw and two members presented a short slide talk to the local Natural History Society there. Mr. Doug Gilroy came to the school and presented an excellent slide talk on Prairie Wildlife.

The arrival of spring brought us more opportunities for outdoor activity. Bird houses were set up around the school grounds including a 28-apartment martin house. At 4:00 one morning we managed to go to the dancing grounds of the Sharp-tailed Grouse. A great many birds were around, some only a few feet away. One even managed to land on the roof of Lorne's panel truck.

Other spring trips included banding young Great Horned Owls and Mountain Bluebirds around Indian Head. The club's largest and last undertaking of the year was an overnight campout at Deep Lake, south of Indian Head. We arrived in the early evening and had the camp set up before dark. The rest of the evening was spent roasting wieners and marshmallows, and joining

in a singsong. Next morning, we had an early breakfast and set out on a hike around the lake. Several species of birds were seen, as well as a coyote loping across a hillside. A rubber raft was used to get back to the campsite, and since most of the girls were wet by the time we got there, we all went in for a swim. We returned to the city tired but happy.

As all members of the St. Chad's Outings Club will agree, we learned a lot and had a lot of fun. Perhaps you can get someone in your town to start a similar club at your school.

## JUNIOR NATURALISTS

Three of the reports printed in the preceding pages were given at the SNHS annual meeting in Saskatoon, October 17, 1970. It was suggested that the reports of our junior naturalists be printed in the *Blue Jay* and that the various organized junior naturalists consider the writing and submitting of group reports as one of their activities. Items for the 1971 March *Blue Jay* should reach Mrs. Joyce Deutscher, 7200 6th Avenue, Regina by January 15, 1971.



# The Blue Jay Bookshelf

**AMERICA THE RAPED.** The Engineering Mentality and the Devastation of a Continent. 1969. By Gene Marine. Simon and Schuster, New York. 312 pp. Price \$6.95 (U.S.).

In one of the chapters of *America the Raped*, Gene Marine quotes the following comment from the *Milwaukee Journal*: "There have been enough studies. The major polluters are known, the job now is to get them to stop polluting." This bald and hard-hitting statement was made in 1966, but members of natural history societies and others concerned about conservation continue to be duped by promises to "study" conservation problems. Reading this book will remind them of what is actually happening to wild areas and recreation facilities while these studies are supposed to be "in progress."

As Marine sees it, the main threat to our environment is the philosophy of organizations that assume "they have the right to do anything we can't stop them from doing." The chapter headings are provocative invitations to examine the validity of this philosophy, for example: "The Effluent Society", "Everybody should Break an Ankle", "I gotta have my Road."

The devastation of an area like central and south Florida becomes for Marine "an uncaring and terrifying symbol of the triumph of the Engineers and the rape of America." Against the ruthlessness of the Engineer, even the most committed conservationist can do nothing: "America can't be saved from the Engineers in 77-acre batches bought by enthusiastic private citizens." Marine further insists that the engineering mentality shapes political policies and commercial development: "Politicians and businessmen, bemused by the dreams of the Engineers, remain blind not only to esthetics, but to economics" and Congressmen "build a dam . . . or vote for someone else's canal or dam . . . without even taking fifteen minutes to learn what the ecological consequences might be. Most of

them have yet to learn what the phrase 'ecological consequences' means."

Marine consistently capitalizes the word Engineer, and it is obvious that he sees the de-personalized Engineer as the main culprit in the rape of America. Without wishing to justify the "engineering mentality" as Marine defines it, the reader will be glad to recognize that there are many professional engineers genuinely interested in conservation. It is my personal feeling that the author gives the impression of having an unfortunate bias against *one* profession, whereas it is against the total uncritical pressure upon our environment that his criticism—and it is a valid one—should be directed.

The book is written in an open, readable style. Statements are amply supported by references to the findings of living scientists with well-established reputations. Read this book soon, order it for your school libraries. It is a sound guide for the preservation of our space ship "Earth".—James R. Jowsey, Regina.

**PRONGHORN ON THE PINHORN GRAZING RESERVE.** 1970. By H. C. Smith, D. A. E. Spalding and D. A. Taylor. Museum and Archives Notes No. 1. Provincial Museum and Archives of Alberta, Edmonton. 4 pp. Free.

This leaflet is title No. 1 of the most recent extension publication series of the Provincial Museum and Archives of Alberta, Edmonton, Alberta. The format, easy style and extensive use of colour photographs all contribute to the attractiveness of the leaflet.

In addition to discussing the pronghorn and referring to typical mammals, birds, reptiles, and insects found on the Pinhorn Reserve in southern Alberta, the leaflet describes the geological features of the region, and the methods used by museum personnel in collecting materials for the pronghorn exhibit at the Provincial Museum.



In view of the planning involved in preparing this leaflet on the pronghorn, it is surprising that more care was not afforded the compilation of the facts and figures presented. The cover-page colour map of pronghorn distribution in the province fails to depict the *former* range in the Sundre area (Palliser's Journal . . . 1863), and neglects to show the *current* distribution of pronghorn in the Milk River Ridge region south of Lethbridge — a region where pronghorn are abundant and harvested during each legal season. Pronghorns are heavier than indicated, with mature males weighing 155 lbs. in late summer (Mitchell Ph.D thesis, 1965) and ranging from 91-133 lbs. during the hunting season. Other minor errors in the leaflet include the reference to the birth of young pronghorn in April and May, rather than May and June, and the omission of western wheat grass as one of the most characteristic grasses on the Pinhorn range. —George J. Mitchell, Regina.

**THE MAMMALS OF JASPER NATIONAL PARK. ALBERTA. 1970.**  
By J. Dewey Soper, Canadian Wildlife Service Report Series, No. 10. The Queen's Printer, Ottawa. 80 pp.

J. Dewey Soper, currently Honorary Research Zoologist at the University of Alberta and one of Canada's senior wildlife biologists, is widely known for his contributions to exact scientific knowledge. A rich background such as Soper's is undoubtedly an asset in the difficult task of gathering together detailed scientific descriptions in order to present them in a general work which can be read and understood by almost anyone interested in the subject. To increase the general reader's interest in his work, Soper takes information from the writings of such mammalogists as Ernest Thompson Seton, who wrote with the purpose of giving readers an insight into the nature of animals. This report systematically describes all the mammals known or believed to occur within Jasper National Park. It is the first attempt at the consolidation of such data.

The excellent format of the report

complements the author's clear and concise style of writing. A brief account of the park's colorful history precedes the informative descriptions of the mammals inhabiting the park. This historical background is made especially interesting and realistic through the inclusion of some personal observations of numerous fur traders and explorers. For example, Soper quotes John McLeod who, while traveling east through the Athabasca Pass with the express in late April of 1826, wrote in his diary concerning the tremendous depth of snow: "We clomb the pathless Pass, resting at night literally, at times, on the tops of the trees".

There is also a section devoted to naturalists "past and present" who have made contributions to the subject. The well-known Canadian naturalist William Spreadborough, for instance, captured a least weasel in the summer of 1898—to this day the only record for Jasper Park.

A brief summary of physical geography, climatic conditions and faunal life zones is also presented. Soper explains that the effects of such climatic factors as temperature, humidity, precipitation and sunshine on soil, vegetation, drainage, erosion, etc., determine the kinds of environment and the types of habitat available to the various animal species. Mammal distribution, for example, is thus more complex on the mountains than on the plains. Other factors involved are the kind of cover available, food requirements, predator-prey relationships and, with a number of species, the length of winter hibernation.

Many of the mammals listed for Jasper Park are also found to the north and south along the mountain range. Thus, a vacation to any Canadian mountain region affords an ideal opportunity to search out some of these species. As a member of an ecology field trip to Waterton-Glacier International Peace Park this past summer I was surprised at the ease of sighting and observing many of these mammals.

In total, 52 forms of native animals have been listed for the park. A challenge is extended in that five other



species, though their presence is hypothetical, should eventually be found—the pygmy shrew, big brown and hoary bats, woodchuck and brown lemming. Wherever possible, Soper uses actual field results, and he includes in his bibliography an excellent list of published items concerning wildlife and related matters. In this way he provides an easy guide to more detailed information. To facilitate easy reading by all, each species is given an English vernacular name. This is followed by the scientific name in current use. For each species, Soper gives the subspecies, external measurements, weight, and status (relative abundance in the park), followed by a description of the habitat and method of reproduction, and some concluding general remarks. Once again, the use of quotations adds to the meaningfulness of the text. For example, Hollister (1912. *Four new mammals from the Canadian Rockies*. Smith. Inst. Misc. Coll. 56(26):1-4) is quoted as remarking on the marmots: "Crossing an alpine flat with its snow banks, boulders, and quiet, one is often startled by a sharp, shrill whistle . . . A search of the surrounding flat reveals a fat vigilant marmot, perched on a huge rock, and watching the intruder from a safe distance. The marmots are wary creatures and at the first whistle of alarm all the animals inhabiting the flat seek a safe place near the burrow entrance, ready to retire in a flash." I personally witnessed just what Hollister recorded, when I stopped with four members of the ecology class this past summer at the upper Carthew Lake, at an elevation of about 7800 feet.

The report is accurate and well-written. It gives you a good understanding of the mammals, and sends you out to make your own observations in the field, where you discover how fascinating these animals are. By enlisting our interest in these mammals, Soper's book also reminds us that preventive measures must be taken now to insure a future for our wildlife. We ourselves will not long be able to inhabit a place where wildlife cannot exist.—*Paul Hart, Regina.*

## TERC AND THE PRINCESS

by Frank H. Brazier, Regina

Recently, two new bird books came to hand simultaneously — *Warrior of the Skies* by John A. Giegling, and *Flashing Wings: The Drama of Bird Flight* by John K. Terres. The two are linked by a common theme, the superlative flight powers of those falconers' favourites, the Goshawk and the Peregrine.

Mr. Giegling gives us a real insight into the first year of life of a Goshawk through his story of Terc, a young male (tercel) hatched in Ungava, and Mr. Terres in his book illustrates his study of the phenomenon of bird flight time and again by reference to the flashing wings of his own Peregrine, the Princess. Accipiter and falcon are brought together and the flight differences between them most ably described by Mr. Giegling when Terc and a falcon spar during migration.

Terc's story is aimed at younger readers, who will respond readily to the imaginative approach of Mr. Giegling. Giving Terc a personality by attributing to the bird such human motives as revenge may be unacceptable scientifically today, but it engenders a bond of sympathy between young readers and Goshawks, and thus with all birds of prey. Children have not always been given such a sympathetic picture of the noble birds of prey. In fact, those who grew up on the stories of the great Thornton W. Burgess, for example, learned a warm regard for all the little creatures who inhabit field and forest, river and marsh, and the dangers they faced daily won their sympathy, but no sympathy was enlisted by Hooty the Owl, who provides a needed check on Peter Rabbit, Whitefoot the Wood Mouse, and Jerry Muskrat. Mr. Giegling is one of the few that have begun to present the other side of the story to young folk.

I recall a story current in the Cajun country of Louisiana which told of the effort to determine the world's most useful animals. The merits of the horse, cow and dog were advanced but

the palm went to the bull alligator because, as the Cajun raconteur explained, if it wasn't for his habit of eating alligator eggs whenever he got the chance, "We'd be fork-deep in alligators right now!" Similarly, if it wasn't for Terc and Hooty the Owl and their kind we'd be fork-deep in Peter Rabbits right now.

The story of bird flight is expanded in *Flashing Wings*. Mr. Terres (past editor of *Audubon Magazine*) has given us the results of a lifetime of patient observation of bird flight, supplemented from many authoritative sources, which are listed in an excellent bibliography. *Flashing Wings* is, of course, written for adults, but it is a splendid introduction to the wonder of bird flight for just that group of younger readers who would get so much out of *Warrior of the Skies*.

Mr. Terres gives scientific information skilfully by weaving personal adventures into his analytical study of bird flight. One feels that the author must be a warm and refreshing person after reading his moving account of his decision to return the Princess to the wild, her rightful home.

I once sat on a spring day observing myriad shorebirds feeding in a flooded field just south of Regina. I knew a Peregrine was nearby as I had earlier seen it sitting motionless on a clod of earth, doing what I was doing—bird-watching! Concentrating on the "peeps" and other waders, I had however forgotten the Peregrine, so I was totally unprepared for the sudden muted shriek as the falcon hurtled down right over me in the glorious, dramatic stoop that has ennobled the species in the eyes of man over the centuries. Terres likens the sound of the dive under the bird's full power to ripping canvas; and my impulse (that of the person who has once been at the target end of artillery shells) to throw myself to the ground at the sudden sound of the Peregrine's plunge, may give an idea of how it sounded to me.

Obviously flight contributes greatly to the success of birds as a class in the animal kingdom, but Terres points

out that there are also many dangers inherent in flight. We have all observed accidents that have happened to flying birds. I remember some years ago a utilities line in Moose Jaw holding the body of a Greater Yellowlegs for months, suspended by its bill. Evidently the bird had flown into the line and its bill had struck at precisely the point where one of the double wires looped around the other, forcing the bill between them and fatally trapping the bird.

To his own entertaining and instructive account of bird flight, the author has appended a list of source material that will be useful to the more serious student. One of the books that Terres recommends is a magnificent work on hummingbirds by C. H. Greenewalt which is regrettably out of print. However, from Germany comes something similar to fill the gap: *Hummingbirds* by Walter Scheithauer, in English translation. This is a delightful account, superbly illustrated by magnificent, high-speed colour photography of hummers in flight taken with the most technically advanced methods.

*Warrior of the Skies*. 1970. By John A. Giegling. Doubleday. New York. 135 pp. \$4.25.

*Flashing Wings: The drama of Bird Flight*. 1968. By John K. Terres. Doubleday. New York. 177 pp. \$5.95.

*Humming Birds*. 1967. By Walter Scheithauer, Tr. from the German. Crowell. New York. 176 pp. ca. \$12.

### Saskatchewan Christmas Bird Count 1970

List the number of each bird species seen on the One Best Day from Tuesday, December 22, 1970 through Sunday, January 3, 1971. In addition, list other species observed during the above dates. See March 1970 *Blue Jay* for other details. Send reports as soon as possible to Mrs. Mary Houston, 863 University Drive, Saskatoon.



# MAYFLIES IN THE SOUTH SASKATCHEWAN RIVER; POLLUTION INDICATORS

by D. M. Lehmkuhl, University Biology Department, Saskatoon

Man has always been attracted to rivers; they often provide the first travel routes into new areas and when settlements are established rivers are a source of water and at the same time a means for disposal of sewage and wastes. Through the construction of reservoirs, rivers are now more important than ever as a source of energy and water for irrigation. Yet, it is only recently that scientists have been making studies of the rivers of the world. The results show that most rivers were destroyed in an ecological sense long before these studies began. It appears, however, that some portions of the Saskatchewan River remain in a state near to the original. It further appears that the insect fauna (based on studies of the Ephemeroptera) may be unique in North America, not because these communities were never found elsewhere, but because the rivers have been destroyed elsewhere. The purpose of this report is to document some facts concerning the mayfly fauna of the South Saskatchewan River, to report some observations on the present state of the river, and to emphasize the extreme vulnerability of the river fauna.

Much taxonomic work remains to be done on the mayflies of the South Saskatchewan River; therefore, the discussion which follows gives families and genera but does not attempt to give species names. The classification and arrangement used here follows that of Edmunds and Allen (1957).

## Family Siphonuridae

Two genera are present, one of which is a new genus presently being described by G. F. Edmunds, Jr. of the University of Utah. This new mayfly is unusual because it is a carnivore. Edmunds (1957) states that there are four genera in N.A. which are carnivorous and all are exceedingly rare in collections and probably rare in nature. As will be seen, three genera of car-

nivorous nymphs are found in the South Saskatchewan. *Isonychia* is abundant in some areas in the river, and it is a specialized filter feeder which has a comb of setae on the front legs which strain detritus from the water.

## Family Oligoneuriidae

The genus *Lachlania* occurs in tropical regions (Cuba, Guatemala, Ecuador), in Utah, and in Saskatchewan (Ide, 1941; Edmunds, 1951, and Burks, 1954). Until the past summer this genus from Saskatchewan was represented by a single specimen, this being the type specimen of *Lachlania saskatchewanensis* Ide. Numerous specimens have now been collected in one locality. The genus is ecologically interesting because it is a filter feeder with behaviour and morphology similar to *Isonychia*.

## Family Heptageniidae

All members of this family are strongly flattened dorso-ventrally. The genera *Stenonema* and *Heptagenia* are widespread in N.A. and both are represented by one or more species in the river. *Epeorus*, typically a mountain form, is represented by one species. *Pseudiron* is of interest because it is a predator and it is also considered to be rare. It has extremely long tarsal claws and the nymph moves crab-like over submerged sand bars. A fourth member of this family, *Anepeorus*, is "an extremely rare form" (Burks, 1953). It was considered extinct by some authorities and until collections were made from the river only about three specimens of nymphs were known. This mayfly, which is a predator, is quite abundant in some areas.

## Family Ametropodidae

*Ametropus* is considered to be a "rare" mayfly but it is very abundant in the river. It lives in shifting sand, has long middle and hind tarsal claws for anchorage, and the claws of the front legs are specialized for a type of

filter feeding. *Siphloplecton* has similarly modified tarsal claws but this mayfly is found in areas of slow water along the shore.

### Family Baetidae

This family is represented in the river by a number of genera, including *Baetis*, *Callibaetis*, *Centroptilum*, *Cloeon*, and *Pseudocloeon*. These are all herbivorous, have a streamlined "bullet" shaped body, and are excellent swimmers.

### Family Leptophlebiidae

*Choroterpes* and *Traverella* are two unusual but not rare forms which are found in slow areas along the edges of the river.

### Families Ephemerellidae and Tricorythidae

The herbivorous genus *Ephemerella* is represented in the river by at least one species and several species of *Tricorythodes* are present.

### Family Caenidae

Saskatoon is the type of locality of the species of *Brachycercus* found in the river. *Caenis* is also present. The last four genera are normally found

crawling in the silt and sediments in areas of slow water along the shore.

### Families Ephemeridae and Polymitarcidae

*Hexagenia* and *Ephemer* (Ephemeridae), and *Ephoron* (Polymitarcidae), have highly modified body forms adapted to burrowing and feeding in river sediments.

### Family Baetiscidae

There are few records of this family in western N.A. (Edmunds, 1960), but one species has been collected in abundance in the river. In *Baetisca*, the thorax has expanded posteriorly so that it covers part of the abdomen and there are curious lateral thoracic spines which probably serve as protection against predators.

For the biologist interested in mayflies, certain of the above could be considered a "find of a lifetime" (e.g., *Anepeorus*). But to find the combination of rare forms, the large number of genera, and the high degree of specialization shown by some of them indicates that the river is truly unusual.

### The River

The South Saskatchewan River is formed by the confluence of the Bow and Oldman Rivers in Alberta and also receives the waters of the Red Deer River near the Saskatchewan-Alberta border. A number of cities contribute wastes to this drainage system so that even at point B (Figure 1) the system is not entirely free from disturbance. All of the mayflies discussed in the previous section may be collected at point B (Lemsford Ferry) and it is assumed that this fauna is distributed throughout zone A-C. Point C is the end of the backwater from Gardiner Dam, and in Zone C-D, as would be expected, a specialized river fauna cannot exist, since the area is ecologically a lake and not a river. With possibly one or two exceptions (e.g. *Callibaetis*) all of the mayflies discussed above are absent in zone C-D.

The effect downstream from the dam is more surprising. Zone D-E had a very impoverished mayfly fauna when a survey was made, and a possible reason is that on the date of the survey (June

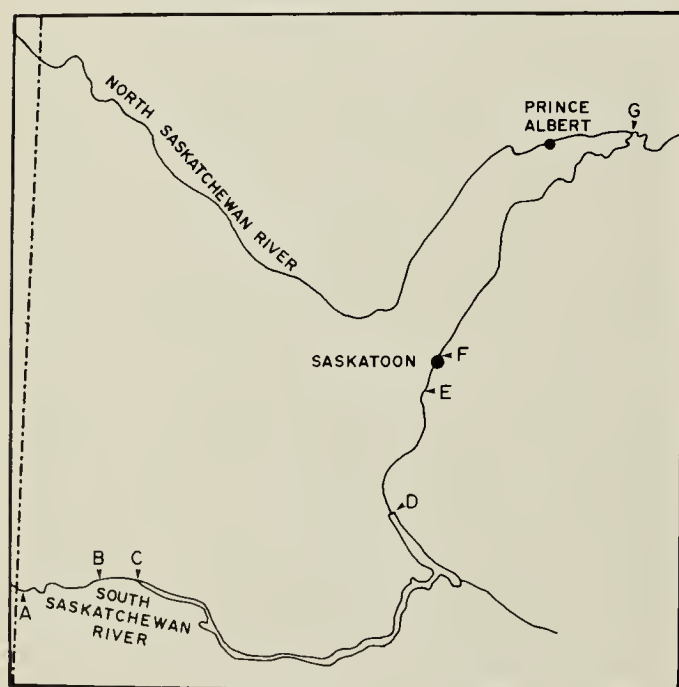


Figure 1. Saskatchewan River System. Zone A-C, "normal". Point C, beginning of Diefenbaker Lake. Zone C-D, lake fauna rather than river fauna. Zone D-E, downstream area influenced by reservoir. Zone E-F, area of partial recovery. Point F, entrance of sewage, mercury, etc. Point G, Pulp Mill effluent enters system. See text for further information.



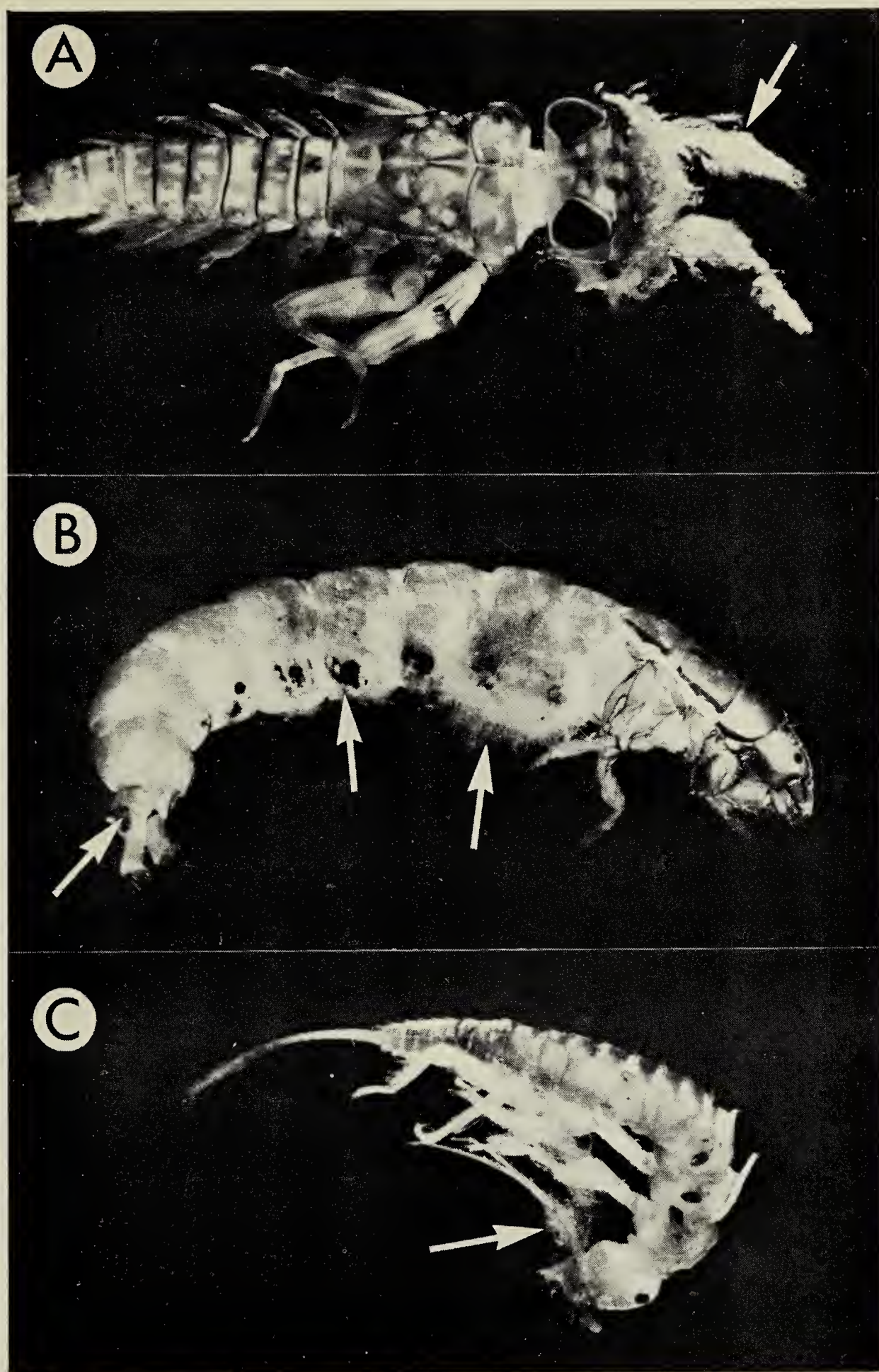


Figure 2. Abnormal specimens collected approximately 5 miles downstream from Saskatoon. A-fungal growth on head and antennae of a mayfly (*Heptagenia* sp.) B-larva of a caddisfly (Trichoptera: Hydropsychidae). Two arrows to the left show "burned" scars where large fleshy translucent branched gills should be located. Arrow to the right shows fungal growths on the body of the larva. C-Stonefly nymph (Plecoptera) which failed to moult properly. Arrow shows the partly moulted exoskeleton. These specimens, although "alive" when collected, are undoubtedly ecologically dead.



4, 1970) the water at the outflow from Gardiner Dam was 10°C colder than the normal river temperature. This low temperature is apparently due to the fact that water forming the outflow is taken from 100+ feet below the surface of the reservoir. The reservoir stratifies in typical lake fashion (cold waters form the bottom layers, warmer water forms the top as a result of the relationship between density and temperature), and the resulting low temperature of the outflow could be sufficient to inhibit proper development and reproduction of many species.

At point E, the water is again of normal temperature, and this corresponds to the reappearance of several species. Zone E-F represents a region of partial, but by no means complete, recovery of the original fauna. Conspicuous because of their absence are the new genus *Isonychia*, *Lachlania*, *Epeorus*, *Anepeorus*, *Choroterpes*, *Traverella*, and *Baetisca*. In other words the most highly specialized and unusual genera are absent in this zone of partial recovery.

At point F, sewage, mercury, etc., are dumped into the river. Most species are eliminated and the fauna downstream from Saskatoon consists mostly

of sewage bacteria and sewage worms (Chironomidae and Tubifex). Some insects drift into the area from upstream and their fate is illustrated in Figures 2 a-c.

Information is not available at present to indicate when or if the river recovers downstream from Saskatoon. Although some species undoubtedly return, it is almost certain that the specialists are eliminated. Pulp mill effluent originating from near Prince Albert enters the system at point G (Tones, 1970).

#### LITERATURE CITED

- Burks, B. D. 1953. The Mayflies, or Ephemeroptera, of Illinois. Bull. Illinois Nat. Hist. Survey 26(1):1-216.  
 Edmunds, George F. Jr. 1951. New species of Utah mayflies. I. Oligoneuriidae (Ephemeroptera). Proc. Ent. Soc. Wash. 53:327-331.  
 Edmunds, George F. Jr. 1957. The predaceous mayfly nymphs of North America. Proc. Utah Acad. Sci., Arts, Letters 34:23-24.  
 Edmunds, George F. Jr. 1960. The mayfly genus *Baetisca* in western North America. Pan-Pacific Entom. 36:102-104.  
 Edmunds, George F. Jr., and R. K. Allen. 1957. A checklist of the Ephemeroptera of North America north of Mexico. Annals Ent. Soc. Amer. 50:317-324.  
 Ide, F. P. 1941. Mayflies of two tropical genera, *Lachlania* and *Campsurus*, from Canada with descriptions. Canad. Entom. 73:153-156.  
 Tones, Patricia. 1970. Pollution in the North Saskatchewan River. The Blue Jay 28:111-113.

## Letters and Notes

### JOHN MACOUN

Reading the article by C. D. Bird in the September *Blue Jay* on John Macoun and his travels on the prairies reminded me that in addition to being a botanist Macoun was also something of a politician.

Macoun was the man commissioned by the Canadian government to suggest a route for the proposed trans-canada railway line that would cover the most fertile areas of the west. This was in the years 1879 and 1880.

The prairie country at that time was not altogether unknown, as 20 years earlier it had been explored by Palliser's party, which made two topographical designations: the "arid belt" and the "fertile belt", the former,

roughly speaking, being the region south of the confluence of the Red Deer River and the South Saskatchewan. Macoun had also reported on the country between Fort Garry and Edmonton in 1872, and his report confirmed the findings of Palliser as to the richness of the northern section of the country. In the light of this previous knowledge of the country, a justifiable criticism can be made of Macoun's support of the southern railway route. This point is clearly made in an article by Dr. F. G. Roe in the *Canadian Historical Review* (Vol. 27, June, 1946): "Up to 1881 Macoun might have passed for an unbridled enthusiast who, starting with the Peace River country in the north and working farther southward in successive explora-



tions, had applied uniformly to every portion of Western Canada from Red River to the Rockies, and without any regard to known or potential climatic or topographical variations, the same sweeping generalizations of unqualified praise. In the year 1881, however, this had become scarcely sufficient. It was now necessary to show that a certain type of country was practically the only one really suitable for settlement; and Macoun, with a hardihood which leaves one breathless, entered upon the task. He distorted in a double sense. He damned with faint praise the region which every man who saw it—a category which includes Macoun himself, previous to 1879-80—could scarcely find words to extol, and he “proved” what later history has signally and lamentably failed to endorse, the superiority of the Missouri Coteau and the southern arid or semi-arid “baldheaded prairie” territory in general.”

Dr. Roe sums up as follows: “Macoun was no arm-chair publicist. He had journeyed over the territories which he unjustly traduced or baselessly extolled; and he offended in the light of knowledge, history and experience. Among propagandists his utterances were trumpeted as science; I doubt whether they were ever anything more than propaganda among scientists.”

There was no doubt that it was more economical to build the railway through the flat, treeless southern prairies, arid though they were known to be, than through the truly fertile belt to the north; and that Macoun lent himself, excellent botanist though he was, to the deception.—A. R. Davidson, Victoria, B.C.

## MERCURY POLLUTION

Mercury can remain in the environment for as much as 100 years where it will continue to poison aquatic life and anything that feeds on it. Less toxic forms may change to highly toxic methyl mercury.

Dentists and medical laboratory technicians are often cited as liable to

mercury poisoning. Doubts have also been raised about the practice of filling teeth with amalgam—a mixture of mercury and silver. Wastes from dental laboratories and from hospitals, where mercury may be used in many techniques, eventually is flushed down the drains.

In the *New York Times* for September 10, 1970, a chart shows that 17 per cent of the uses of mercury in the United States are for hospital, laboratory, and dental purposes. How much of the mercury contamination of our Saskatchewan and Manitoba waterways can be traced to such usage.

A news release from *Rachael Carson Trust for the Living Environment Inc.*, 8940 Jones Mill Road, Washington, D.C. 20015, alerts conservationists of this source of environment pollution and urges them to try to reduce unnecessary pollution from these sources because no one knows how long it will take to clean up our waterways even if no more mercury enters the water.

## LARGE OWLS MIGRATING IN DAYTIME

On April 13, 1970, my wife and I, both teachers in Birch Hills, had just returned home from a short after-school car ride into the country. I glanced at the sky and spotted what appeared to be four buteos soaring high in the sky. The winds at that time were breezy from the ESE, but the sky was relatively clear.

Since the birds were *very high*, even with the binoculars (7x35) I couldn't positively identify the one buteo I eventually got into view. The bird was very dark, however, both ventrally and on the under wing surface. As I was mentally engaged in attempting to make an identification, another one of the birds soared into view. I was somewhat astonished to see that it was an owl. While I watched, it approached and attempted to grapple with the buteo. I watched these two for some time, and each time the owl approached the buteo it would attempt to close

with it. When I focused on the other two of the four, I found these to be an owl and a buteo, and that owl was also pestering the buteo.

As I mentioned before, these birds were too high to permit positive identification. With the sun somewhat behind them, but lower on the horizon, only the general dark color of the buteos and the grey coloration of the owls was distinguishable. Both species appeared to be of the same size.

I might stress that the aerial dog-fights were only brief encounters, and that the birds were definitely sailing (soaring) with very little wing action. The owls seemed to be as efficient in finding the updrafts as the buteos.—*M. Mareschal*, Birch Hills, Sask.

### BIRDS AT GARBAGE DUMPS

When you are out on a birding trip, do not overlook your local garbage dump. Although the stench of rotting garbage and the acrid smell of burnt remains may offend our human nostrils, birds, with little sense of smell, flock to these unsightly accumulations of man-made debris.

When we lived in Prince Albert we often made birding trips to the garbage dumps there. Prince Albert has two dumps—one located on the north-east of the city in the industrial park; the other at the Saskatchewan Penitentiary. When visiting the dump at the Penitentiary, it is a wise move to inform the gate office of your activities. Although you can get a good view of the dump from the public road, people in parked cars scanning the area with binoculars are open to suspicion.

Gulls particularly like the dumps, and arrive punctually with each new disposal of garbage. Ring-billed, California, and Franklin's gulls are regular visitors; the Herring Gull is an irregular visitor, but it is easily distinguishable by its larger size and pink legs. If you are very fortunate you may see a Glaucous gull (See *Blue Jay*, March 1970). In winter ravens are in abundance, being replaced in the spring by noisy flocks of crows. Mag-

pies find the dump a good place for food all year round. A few wintering Starlings are joined by others in the spring. Sharp-tailed grouse find their own territory undisturbed by large flocks of redpolls in the weeds surrounding the dump, while rats and mice provide good hunting for Pigeon Hawks, Red-tailed Hawks and Swainson's Hawks. Great Horned and Short-eared owls also find the dump rewarding. What to the human eye is unsightly is a bird "Shangri-la" in the city, safe from cats and marauding boys with air rifles or beebie guns.—*Elizabeth Beacham*, Sorrento, B.C.

### OBSERVATION OF A BEAR CUB FEEDING

In the spring of 1970, when I was on duty at the Dube Lake Fire Tower about 40 miles north of Green Lake, Saskatchewan, I had an opportunity to observe a bear cub feeding in what appeared to me an unusual manner. Watching from the tower with seven-power binoculars, I could see the cub plainly as it fed in the top branches of a medium-sized aspen poplar about 500 yards away. I first noticed the cub (apparently a yearling) on the morning of May 17, 1970. A larger black bear (perhaps its mother) was standing at the foot of the tree in which the cub was feeding, but it soon walked away and did not return.

As I climbed up the tower again after lunch, the cub climbed down the tree, but about 2:00 p.m. I noticed it again in a tree farther from the tower, where I watched it most of the afternoon. The tree was coming in leaf and had fully developed seed tassels. The cub appeared to be eating the new leaves and seed tassels and stripping and eating the bark off the smaller branches. It continued until the tree top was completely stripped of leaves, and the bark appeared to be peeled from the outer ends of the remaining branches.

There was a strong wind up to 40 m.p.h. in gusts, and the tree tops were swaying, so that the cub was obliged to perform some amazing climbing and



## PARKS IN SASKATCHEWAN

In a recent speech in Prince Albert, Resources Minister Barrie stated that this province has "practically reached its limit in the number of parks and recreation areas that it can properly support." This reflects the low value our present government places on the natural attractiveness and recreation potential of our province. At present, Saskatchewan has one national and 14 provincial parks. Alberta has five national, 44 provincial parks and two large wilderness areas. Saskatchewan does not have a single wilderness area. True, Alberta has the advantage of mountain scenery, but it is also important that most of Alberta's park lands are set aside exclusively for public recreation use. Saskatchewan is now second-last among provinces in the number of tourists visiting, and spends less per capita on tourism than any other province.

Why do people visit parks? Not to encounter hordes of people or to see cattle or oil wells! Yet our government persists in the notion that so-called "multiple use" is compatible with tourism. This has led to seismic exploration and oil pollution in Moose Mountain Provincial Park and the park land destroyed there has not been replaced by new parks. An independent public opinion survey conducted recently in the Cypress Hills by Robert Scace showed that 69% of park visitors disapproved of cattle grazing in the parks, 75% disapproved of sport hunting, 86% disapproved of timber cutting, and 95% disapproved of mining (including oil well drilling). All of these activities are conducted in Saskatchewan provincial parks.

Contrary to Mr. Barrie's opinion, I believe that we must set aside park lands now to cover our future needs, even though we do not have the money for immediate development. After the best lands have been sold or leased to commercial interests we cannot expect to get them back again in a state of pollution-free natural beauty with high tourist potential.—*David H. Sheppard*, Envac, Box 1043, Fort Qu'Appelle.

balancing feats, at a minimum of 40 feet from the ground. Once it slipped, but it held on. It would climb out on all the larger limbs and would break off and hold smaller branches and the ends of larger branches, and eat from them until they were stripped, or dropped. Eventually, I had to stop watching the cub to attend to my duties, and when I looked for it again, it had disappeared.

Since the tree was easily accessible from the tower, I went out to it two days later. Broken branches were scattered about the foot of the tree. They had been chewed and the leaves and seed tassels eaten. There were some branches with the leaves and tassels still on them, so the cub had apparently not touched those on the ground. A bed had apparently been made beside a log close to the foot of the tree. There was a quantity of bear stool near it, which seemed to have been left fairly recently. The droppings appeared to contain the remains of poplar.

Some days later, I saw other tree tops that appeared to be partly stripped and broken, and on May 30, I went to look at these. Four trees close together had been damaged in the same way as the tree in which I had seen the cub, but these were not so extensively stripped. None of the four trees had seed tassels. Under the trees, however, there were smaller branches and bear scat, and the droppings again appeared to be made up of leaves and bark. The branches and scat appeared slightly dried up, which suggested that the cub had fed here earlier.

It would appear that the cub made a practice of tree top grazing, at least for a limited time, but the evidence is too sketchy to make any positive conclusions as to the extent to which poplar makes up the regular diet of bears. Could it be that dietary or regulatory need causes a cub to eat poplar at the start of the season? Or could it be that a cub feeds for safely high up in the trees? These are only speculations on my part, and I would be interested if anyone could confirm or comment on these observations.—*E. Dimond*, Loon Lake, Saskatchewan.





Great Horned Owl

Photo by Harold Hosford

### **COMPLETE PROTECTION IN SASKATCHEWAN**

A long-standing goal of the SNHS was realized when the government revised the Game Act at the last session of the legislature to give complete protection to birds of prey. It is now illegal to shoot any hawk or owl at any time of year in Saskatchewan (Game Act, Section 13, subsection (1), page 7 of 1970 Office Consolidation of the Game Act). The Saskatchewan Natural History Society first proposed such legislation in 1954 (*Blue Jay*, 12:19) and has, through the years, submitted briefs and resolutions urging the government to take this step.



# SNHS ANNUAL AWARDS

## SNHS CONSERVATION AWARD 1970

The 1970 Conservation Award was made to Ruth and David Chandler. The citation was given by Lorne Scott, winner of the award in 1969. The text of the citation follows:

"The short-grass prairie region in the southwestern portion of Saskatchewan is unique in many ways in respect to wildlife. One of the more colourful creatures native to this area is the Black-tailed Prairie Dog. Since the coming of the white man to North America the Prairie Dog has been steadily losing the battle against man with his guns, traps, poisons and other destructive forces.

Fortunately there were a few people who saw that complete destruction of this playful little mammal would come about if protective measures were not taken. In Saskatchewan, Ruth and David Chandler, who grew up on their father's ranch in the Val Marie area and who have been long-time members of this society, could see that over the years the Prairie Dog was losing the battle against man.

One of their first steps to inform the public of their concern for the future of the Prairie Dog was an article in the December 1962 issue of the *Blue Jay*. Through their continued efforts, which involved meetings with the local M.L.A., three years later at an executive meeting on April 10, 1965 the president of the Saskatchewan Natural History Society signed a 33-year lease for the N.E.  $\frac{1}{4}$  of Sec. 23 Tp. 2 R. 13 west of the 3rd meridian; thereby giving the Society legal means to provide protection to a colony of Prairie Dogs. It was a proud day when the cairn, constructed by the Chandlers, was unveiled at the Summer Meet in 1969.

This area was given further protection this fall when it was declared the Frenchman River Wildlife Refuge under the Provincial Game Act.

On behalf of the S.N.H.S., I would like to present the annual Conservation Award to Ruth and David Chandler for their efforts in obtaining the Prairie Dog Sanctuary."

## CLIFF SHAW AWARD 1970

The Cliff Shaw Memorial Award for 1970 was presented to Kees Vermeer of the Canadian Wildlife Service, who submitted a total of eight contributions to the *Blue Jay* in the four issues since the 1969 annual meeting.

In presenting the award, the Editor reviewed briefly the history of the *Blue Jay*, which was first published in Yorkton in 1942 with Mrs. Priestly as editor. Upon the premature death of Mrs. Priestly, the work of editing the journal was taken on by Cliff Shaw, at first under the auspices of the Yorkton Natural History Society and subsequently of the provincial society which was formed to support the publication. At the present time there are a number of local societies, including the recently revived Yorkton society, which promote the same aims as those of the Saskatchewan Natural History Society, and the Editor expressed the hope that, in the environmental crisis we are facing, that movement would continue to grow.

When Cliff Shaw died, the Society established the annual Cliff Shaw award in recognition of the tradition established by him and Mrs. Priestly of encouraging all interested readers of the journal to contribute to it. Last year's generous financial contribution from the Yorkton society will make it possible to continue the award for a number of years.

Kees Vermeer is an active biologist and writer whose articles have made a valuable contribution to the *Blue Jay*. The award recognized his contribution throughout the past year, with special mention going to an article on the nesting of Double-crested Cormorants at Cypress Lake. It is gratifying to note that Hegland Island for which Vermeer recommended protection in his article has now been established as a wildlife refuge by the Department of Natural Resources.

In recognizing the work of Kees Vermeer, the Society is also recognizing the work of the Canadian Wildlife Service, with its increasing attention to the ecosystem.

# SASKATCHEWAN NATURAL HISTORY SOCIETY

## FINANCIAL STATEMENT — YEAR ENDING SEPTEMBER 30, 1970

### INCOME

Memberships, including sales of <i>Blue Jay</i> .....		\$7,270.12
Spec. Pub. no. 1 — Guide to Sask. Mammals .....	\$ 58.50	
Spec. Pub. no. 2 — Birds of the Sask. River .....	59.92	
Spec. Pub. no. 3 — Birds of Regina .....	56.00	
Spec. Pub. no. 4 — Blue Jay Index .....	4.00	
Spec. Pub. no. 5 — Birds of Lake Athabasca .....	41.53	
Spec. Pub. no. 6 — Birds of Northeastern Sask. ....	31.70	
Publication — Birds of the Elbow .....	4.06	
Bookshop net profit (16.4% of sales) .....	505.89	
Donations (general) .....	918.15	
Annual meeting (net) .....	34.26	
Summer meeting (net) .....	99.88	
Interest (bank accounts and bonds) .....	214.39	2,028.28
		<u>9,298.40</u>

### EXPENSE

Printing of <i>Blue Jay</i> (4 issues) .....	4,658.55	
Advertising and promotion (Newsletter) .....	437.90	
Honoraria: \$300 and \$190 (bookshop) .....	490.00	
Office rental and lights .....	504.57	
Postage .....	370.01	
Office supplies and stationery .....	92.11	
Bank charges less U.S. premium .....	55.23	
Affiliation fees (4) .....	65.00	
Miscellaneous office and admin. expense.....	63.59	
Delegate's expense (Canad. Audubon Conference) .....	68.00	6,804.96
		<u>6,804.96</u>

EXCESS OF INCOME OVER EXPENSE ..... \$2,493.44

### Statement of Assets and Liabilities as at September 30, 1970

#### ASSETS

Cash on hand .....		\$ 40.00
Cash in bank (current) .....	\$ 3,162.90	
Cash in bank (savings) .....	4,798.81	7,961.71
		<u>7,961.71</u>
Government of Canada bonds .....		300.00
Stock on hand .....		613.77
Accounts receivable (less prepaid orders) .....		186.27
Deposits with Postal Dept. and Sask. Power .....		71.77
Balance of publication subsidy re: Hours and the Birds.....	2,550.33	
Less transfer to net worth account .....	2,150.00	400.33
		<u>9,573.85</u>

#### LIABILITIES

Trust Fund re: Refuge and Sanctuary		
Balance at September 30, 1969 .....	\$ 1,766.49	
Plus donations during past year .....	50.00	1,816.49

#### NET WORTH

Balance at September 30, 1969 .....	7,744.64	
Surplus September 30, 1970 .....	\$2,493.44	
Refund from YNHS .....	130.66	
(to cover Cliff Shaw annual award) .....	2,624.10	
	<u>10,368.74</u>	
Less: Hours and the Birds transfer.....	2,150.00	
Less adjustment re: 1967-68 honorarium..	461.38	2,611.38
		<u>7,757.36</u>
		<u>\$9,573.85</u>



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All items for publication should be submitted to George F. Ledingham, Editor, 2335 Athol Street, Regina.

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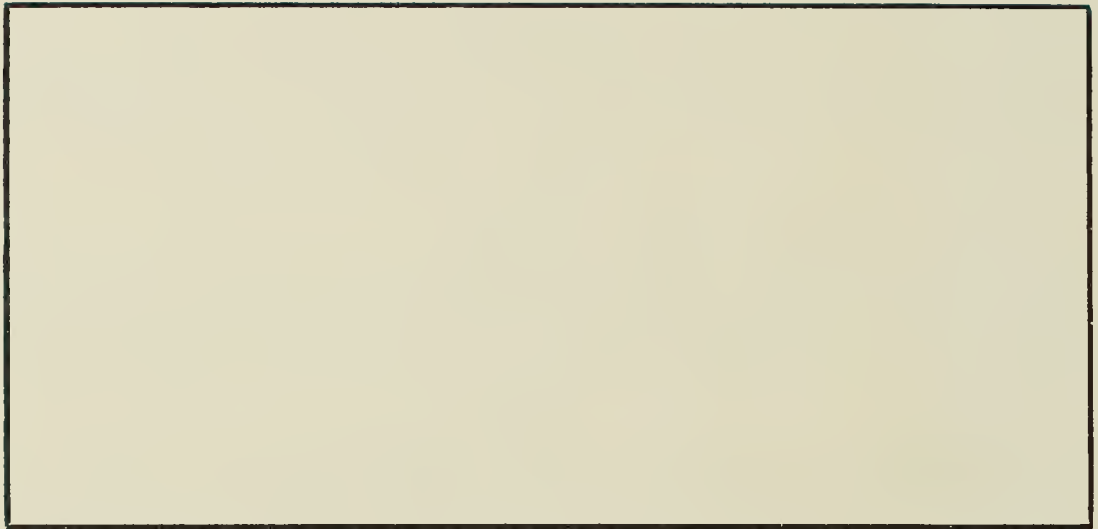
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Send all renewals and new memberships to THE TREASURER, SNHS, Box 1321, Regina, Saskatchewan. (Note: Bookshop orders and general inquiries should be sent to Box 1121.)

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